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ABSTRACT

This study examines the importance of using effectiveness indicators for assessing institutional outcomes, and their congruence with actual or potential use in making institutional change and improvement, in selected northwest community colleges. The study was undertaken in response to the Northwest Association of Schools and Colleges' transition to an outcomes-based accreditation model in 1991. Questionnaires were completed by 148 primary administrators working at northwest community colleges that completed the regional accreditation process since 1990. The survey instrument measured whether 13 effectiveness indicators were important to the institutional change process, and whether such indicators have been used at the institution. In general, the study shows that there is a positive relationship in community colleges between the development of institutional effectiveness indicators and institutional change and improvement. Overwhelming support was given by administrators about the value of using effectiveness indicators to initiate change, with support ranging from 85.5% to 97.0% they should use effectiveness indicators to initiate institutional change. Indicators prioritized as most important by at least 90% of participants include: external indicators related to employer satisfaction and job placement levels, student and customer satisfaction, and student progression. All administrators who have used effectiveness indicators believe that external indicators and community development led to the most positive change. (Contains approximately 90 references.) (AS)

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ED 429 649

An Investigative Study on the Systematic Application of Effectiveness Indicators for Institutional Improvement in Northwest Community Colleges

by

James E. Sorensen

A DISSERTATION

submitted to

Oregon State University

in partial fulfillment of
the requirements for the
degree of

Doctor of Education

Completed April 15, 1998
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Dedication

This dissertation is dedicated to my wife Christine, whose love, belief and positive support has provided me the strength and endurance to continue when the journey sometimes seemed to be endless.

Acknowledgments

The achievement of this goal is possible only with the faith, encouragement and support of the many people around us.

Thanks to the professionals I have had the pleasure of being associated with and who have encouraged me to go on, Dr. James Ford, Dr. Ed Command, Dr. George Delaney, Dr. Wally Sigmar and Susan Tinker. Thanks to the faculty and staff of the Community College Leadership Program, and in particular Dr. Dale Parnell and Dr. Charles Carpenter, who continuously challenged and encouraged my growth and development. Thanks to my current graduate advisor Dr. Jodi Engel for encouraging and assisting me in the final completion of this effort. And to my graduate committee Dr. Jodi Engel, Dr. Hank Sredl, Dr. Betty Duvall, Dr. Cheryl Jordan and Dr. Tana Hasart, as well as Dr. Dale Parnell, Dr. George Delaney and Dr. Hugh Walkup. Most of all thanks to my wife, friend and greatest supporter, Christine, for her love, continuous belief, and positive support during this project, my career, and in all our endeavors together. And thanks to my parents, who taught me always to do my best, and to our sons, Brian and Chad, and daughter-in-law Victoria, for their encouragement and belief in me.

An Abstract of The Dissertation of

James E. Sorensen for the degree of Doctor of Education in Education presented on April 15, 1998. Title: An Investigative Study on the Systematic Application of Effectiveness Indicators for Institutional Improvement in Northwest Community Colleges

Abstract approved: Joanne B. Engel
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In 1990, the Northwest Association of Schools and Colleges moved to an accreditation model based on outcomes, their assessment and deliberative attempts at institutional change and improvement. No study existed in northwest community colleges which identified the systematic application of effectiveness indicators for institutional change and improvement. This study was conducted with primary administrators in northwest community colleges that have completed the regional accreditation process since 1990. It examined the perceived importance of using effectiveness indicators for assessing institutional outcomes, and their congruence with actual or potential use in making institutional change and improvements.

This study shows there is a positive relationship in community colleges between the development of institutional effectiveness indicators and institutional change and improvement. All administrators believed they should be using effectiveness indicators but used them in varying degrees for planning, improving services, budgeting, accreditation,

program review and other decision making processes essential to the functioning of community colleges. Although the use varied by category and administrative subgroup, those administrators who had used effectiveness indicators believed their use led to positive institutional change.

In order for this study to have an affect on northwest community colleges, several important conditions need to be addressed. The Northwest Association of Schools and Colleges must enforce Policy Statement 2.2, Policy on Educational Assessment, which requires the adoption of an institutional effectiveness model. Community colleges must embrace this model as a mechanism useful for the continuous improvement process. Faculty, staff, administrators and boards must be trained in the application and use of the institutional effectiveness model. Boards must establish outcomes or institutional goals based on their unique mission and must hold the community college president accountable for the achievement of institutional outcomes and the implementation of an assessment process. Assessment must be completed at all levels of the institution. Institutions must adopt an assessment model that reflects the institutions goals and objectives, and place its responsibility prominently within the organization. Finally, measures must be developed at each level or process by the persons closest to the process.

Failure to enforce accreditation standards will lead to publicly enacted performance indicators aimed at achieving institutional effectiveness or accountability.

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An Investigative Study on the Systematic Application
of Effectiveness Indicators for Institutional Improvement
in Northwest Community Colleges

Chapter I: Introduction

Background

Education, at all levels, is under constant pressure from individuals representing public and private sectors, for change and improvement. Tax limitation legislation, federal and state legislative mandates, workforce training needs, accreditation requirements, quality improvement philosophies, and most important of all, the contemporary educational needs of students require institutions to change and improve. This context has motivated community colleges to identify and use effectiveness indicators as a strategy aimed at purposeful change and improvement in an effort to fulfill their unique mission.

James Ratcliff described community colleges as "...those institutions that provide general and liberal education, career and vocational education, and adult and continuing education. ...The term 'community college' is now used generically to refer to all colleges awarding no higher than a two-year degree" (Ratcliff in Baker III, 1994, p. 4).

Community colleges within the system of all higher education in the United States fulfill a particular mission. This higher education system was described by the Carnegie Classification as "...all colleges and universities in the United States that are degree-granting and accredited by an agency recognized by the U.S. Secretary of Education" (AACU, 1996, p. 52). The classification of institutions is described hierarchically as Research Universities, Doctoral Universities, Masters or Comprehensive Colleges and

Universities, Baccalaureate or Liberal Arts Colleges and Associate of Arts Colleges which include community, junior and technical colleges (AASCU, 1996).

Discussions about this unique position of community colleges in American education began as early as 1894 by Reverend Jim Carroll of Baylor University, and almost immediately repeated by William Rainey Harper of the University of Chicago and David Starr Jordan, President of Stanford University. The early founders of junior colleges supported them for different reasons but the general concept of fulfilling the freshman and sophomore years of a baccalaureate or equivalent education was the intended purpose (Ratcliff in Baker III, 1994).

From these early years the evolution of community colleges in the United States has fulfilled a mission described primarily as focused on access. Ratcliff described the mission succinctly. "Community Colleges have stood for open admissions, geographic proximity, and relative financial affordability to the potential students of the community and region served. Within this structure of American higher education, the community college's contribution has been increased accessibility and pragmatic curricular diversity geared to local and regional needs" (Ratcliff in Baker III, 1994, p. 4).

The effectiveness of community colleges in meeting their mission may be experienced directly by students in classrooms or identified by "proxy" indicators or indicators of effectiveness. Proxy indicators might include occupational placement rates or rates of transfer to four year colleges and universities which by assumption indicate effectiveness in meeting this mission. In the absence of indicators, effectiveness is informally interpreted from individual opinions, media presentations, and anecdotal information. Opinions about effective or ineffective education will always be held by the

public and may be based on the best information available or upon readily available anecdotal information. Community colleges operating in this context have, out of necessity, been motivated to develop effectiveness indicators which provide the best information available for decision-making, program improvements and molding of public opinion. If community colleges are to improve, most community college leaders believe they must systematically develop objectives and strategies for program and process improvement (Ewell & Jones, 1994; AACC, 1994).

The development and understanding of appropriate effectiveness indicators, accepted internally by members of the institutions and externally by the public is difficult. The use of effectiveness indicators for purposeful systematic institutional change and improvement is even more challenging since needed improvements compete with other politically important or educationally significant needs.

Institutional Effectiveness as an Accreditation Requirement

Accreditation is usually a process of evaluation performed by peers from the region. The Northwest Association of Schools and Colleges described accreditation as

> ... a process of recognizing educational institutions for performance, integrity, and quality which entitles them to the confidence of the educational community and the public. In the United States this recognition is extended largely through non-governmental, voluntary institutional or professional associations which have responsibility for establishing criteria, visiting and evaluating institutions at their requests and approving those institutions and programs which meet their criteria. (NASC, 1994, p. 1)

Two forms of accreditation exist in community colleges. The institutional accreditation is granted only by a regional accrediting commission or association and

specialized accreditation is granted by national organizations representing professions such as law, medicine, engineering, architecture, or auto mechanics.

This study is concerned with institutional accreditation and the requirements for that accreditation. The Northwest Association of Schools and Colleges was originally formed in 1917 and has been listed by the "U.S. Secretary of Education as a nationally recognized accrediting agency for institutions offering programs of at least one academic year in length at the post-secondary level" (NASC, 1994, p. 4).

Accreditation requirements are recognized as one of the three strongest influences on community colleges. The other two are legislative or public policy mandates and bureaucratic agency directives either from the federal or state level.

The intrusiveness of federal agency directives was reflected by actions of the U.S. Department of Education and epitomized by their development of the State Postsecondary Review Entities (SPRE) later struck down by Congress. The SPRE was intended to directly or indirectly give more accreditation control to the U.S. Department of Education in concert with appropriate state agencies. What it did most was add weight to the already adopted outcome assessment standards of all regional accrediting associations and more directly involved federal agencies in this process.

This federal attitude and action was the culmination of many previous commission reports and probably the result of their perception about the lack of perceived use of effectiveness indicators in many educational two and four year institutions of higher education. The regulation, although struck down by Congress in the 1995 session, epitomized the attitude of many state and federal agency staff and politicians. It was conceived in a hostile educational environment. It: (a) placed more control in the hands of

federal and state government over education; (b) reflected a lack of trust in public institutions; (c) reflected a lack of trust in self regulation; (d) reflected some scandals in public institutions; (e) reflected the high cost of education and need for access; (f) reflected the lack of graduating student skills; and (g) reflected the lack of repayment of student loans by students (Malik and Petersen, 1993, p. 15).

Although the proposed change failed, "it is clear that the department's career staff seek regulatory power over the non-governmental accrediting associations and intend to force accreditors in turn to regulate public and independent nonprofit institutions on behalf of the department" (Malik and Petersen, 1993, p. 16).

Although these intrusive measures seem to be ongoing, regional accrediting associations did begin to formalize outcomes assessment requirements as early as 1985.

> The 1990 Annual Report of the Commission on Colleges of the Southern Association of Colleges and Schools advocated a shift in operational philosophy; ...the shift from a set of standards which were essentially input driven to a set of criteria with institutional effectiveness as the integrating principle represented a major change, one that would soon be emulated by other accrediting entities. (Bryant, 1994, p. 18)

In the Pacific Northwest, the Northwest Association of Schools and Colleges, Commission on Colleges, also shifted its philosophy and began to require outcomes assessment through the use of effectiveness indicators by the adoption of the Standard V, Policy #25, in 1990, which in 1996, became Standard Two - Educational Program And Its Effectiveness: Policy 2.2, Policy on Educational Assessment.

Institutional Effectiveness-A Requirement of the Northwest Association of Schools and Colleges, Commission on Colleges: Standard V, Policy #25

Under the 1990 requirements of the Northwest Association of Schools and Colleges, Commission on Colleges, "Standard V - Educational Program and its Effectiveness" requires outcomes assessment. In Standard V:

> ...the Commission emphasizes the necessity of a continuing process of academic planning, the carrying out of those plans, the assessment of outcomes, and the influencing of the planning process by the assessment activities. Assessment which does not result in conscious and deliberative attempts at improvement is rarely worth the effort. (NASC, 1994, p. 51)

The policy statement requires institutions to develop an institutional effectiveness model or plan for institutional improvement even though the specificity of the model is left open to each institution.

The commission, in 1996, in Policy Statement 2.2 Policy on Educational Assessment:

> ...expects each institution and program to adopt an assessment plan responsive to its mission and its needs. In so doing, the commission urges the necessity of a continuing process of academic planning, the carrying out of those plans, the assessment of the outcomes, and the influencing of the planning process by the assessment activities. (NASC, 1996, p. 36)

The commission continued to explain how accreditation has changed historically from a process which looked at resources, processes, and structures to one which emphasizes outcomes "to evaluate the effectiveness of that educational program in terms of the change it brings about in students, and to make improvements in the program dictated by the evaluative process" (NASC, 1994, p. 58). The Commission on Colleges went on to claim that "nearly every post secondary institution accredited by the Commission on Colleges engages in some type of outcomes assessment" (NASC, 1994, p. 5).

This study will examine the relationship of this requirement to actual attitudes and behaviors of selected administrators in northwest community colleges which have undergone accreditation since 1990 when the NASC requirement began. The commission stated in 1990,

> The ...policy is to stress outcome assessment as an essential part of the ongoing institutional self study and accreditation processes to underline the necessity for each institution to formulate a plan which provide for a series of outcome measures that are internally consistent and in accord with its mission and structure, and finally to provide some examples of a variety of successful schemes for assessing educational outcomes. (NASC, 1994, p. 58; NASC, 1996, p. 37)

Accreditation Guidelines and Indicators of Effectiveness

The 1996 edition, as well as earlier versions of the Accreditation Handbook produced since 1990, by the Northwest Association of Schools and Colleges (NASC) has provided several guidelines which would assist colleges in developing a list of potential indicators to be used in assessing institutional effectiveness. NASC states: "There follows several outcomes measures which when used in appropriate combinations and informed by institutional mission, could yield an efficacious program of outcomes assessment. This list is intended to be illustrative and exemplary as opposed to prescriptive and exhaustive" (NASC, 1996, p. 37).

The kinds of indicators suggested and used in conjunction with the unique mission of each community college are: "student information," such as gender, age group, and ethnicity over time; "mid-program assessments," such as pre and post writing samples in the completion of writing courses; "end of program assessments," such as retention pattern of students over time; "program review and specialized accreditation," such as nursing accreditation by National League of Nursing or a regular program evaluation

process by internal or external reviewers; "alumni satisfaction and loyalty," such as customer satisfaction surveys about the focus and quality of their educational experience; "dropouts and non-completers," such as attrition rates over time or attrition rates in relationship to student success strategies; "employment and/or employer satisfaction measures," such as employer follow-up studies on the quality of preparation of trained workers or follow-up studies with graduates about the quality and satisfaction with their training and its applicability to their current employment (NASC, 1996, p. 37-38).

The NASC as well as other regional accrediting associations have not tried to directly prescribe which indicators to use, however when examining the list of indicators used by Midlands Community Colleges, or the core indicators suggested by the American Association of Community Colleges, one can quickly recognize almost all of the suggestions made by the NASC, particularly when developed in conjunction with the mission goals and objectives required of each community college through accreditation, if not by normal practice.

The Study

Problem Statement.

This study will examine the perceived importance of using effectiveness indicators for assessing institutional outcomes, and their congruence with actual or potential use in making institutional changes and improvements in northwest community colleges that have completed the regional accreditation process since 1990.

No study exists in northwest community colleges which identifies the systematic application of effectiveness indicators for institutional change and improvement. This is an important study because the previous accreditation requirement in "Standard V" and currently Policy 2.2 of the Northwest Association of Schools and Colleges, beginning as early as 1990, imply a relationship between accreditation self studies based on outcomes assessment and purposeful change and improvement in institutions. Roueche, Johnson and Roueche reiterated a similar theme in Embracing the Tiger: The Effectiveness Debate and the Community College, 1997). Johnson succinctly stated the issue when he said, "what has been lacking in the rush of literature that has emerged over the past decade is a picture of how community colleges have embraced the institutional effectiveness movement and how and to what extent they are measuring their own performance" (Johnson in Roueche, Johnson, Roueche, 1997, p. 27).

Hypothesis. There is a positive relationship in community colleges accredited by Northwest Association of Schools and Colleges, Commission on Colleges since 1990, between the development of institutional effectiveness indicators and institutional change and improvement.

General Questions.

Questions that will set the context and guide the literature review are:

1. What kind of purposely selected effectiveness indicators are suggested by the accreditation process and related literature, and can be used to base institutional effectiveness assessment?

2. What does the research literature have to say about the use of effectiveness indicators in assessment practices and for making institutional change?

Research Questions.

Questions that will guide this investigative quantitative study are:

1. Do community college administrators believe they should use effectiveness indicators for initiating institutional change?
2. Since the last community college regional accreditation (1990 or later) have community college administrators used effectiveness indicators for initiating institutional change?
3. Do community college administrators believe that the use of effectiveness indicators led to positive changes in their institutions?
4. Is there a difference by community college administrative position in the perception about the perceived importance of using effectiveness indicators for initiating institutional change?
5. Is there a difference by community college administrative position in the use of effectiveness indicators for initiating institutional change?
6. Is there a difference by community college administrative position in the perception that the use of effectiveness indicators led to positive changes in the institution?

Institutional Effectiveness: The Issue

Institutional effectiveness became important as an issue in community college education partially in response to the Carnegie Commission Report (1984) on quality, or the lack of quality, in higher education in the early 1980s. The National Governors Association gave impetus to the assessment movement in the mid 1980s by "...its shared vision that assessment is the catalyst for improving quality. In addition, the governors regarded assessment as a broader process of defining more clearly the mission of each institution and encouraging the use of information for program improvement" (Alexander, Clinton and Kean in Erwin, 1991, p. 2).

The necessity for improvement in the outcomes of education was raised to a conscious level in community colleges by Dale Parnell in The Neglected Majority, (1985), in order to meet the educational and training needs of neglected high schools and community college students. In his most recent book "Why Do I Have To Learn This?" (1995), he reiterated the importance of contextual teaching and competency-based educational practices as a strategy for meeting workforce training needs of the 21st century, as stated in the Secretary's Commission on Achieving Necessary Skills, U.S. Department of Labor (1992). Dan Hull and Dale Parnell again reiterated this theme in Tech Prep Associate Degree, (1991), in an attempt to develop contextual and competency based learning in high schools and community colleges and an improved level of student competencies. Quality learning in the classroom, the essence of effectiveness, was emphasized as a critical concern by Thomas Angelo and Patricia Cross in Classroom Assessment Techniques: A Handbook for College Teachers, (1993). They emphasized that classroom assessment techniques must focus on student feedback in the teaching and

learning process in order for effective teaching and learning process to occur. As Pat Cross stated, "...teaching without learning is just talking" (Angelo & Cross, 1993).

Characteristics of Successful Assessment Programs

Educators endeavor to assess programs because of accreditation mandates, legislative requirements for accountability, funding enhancements, and a desire to improve the quality of the teaching and learning process.

Assessment, whether it is directed at classroom teaching and learning processes or generally at institutional effectiveness, is difficult. It requires administration, faculty, and staff to be knowledgeable about technical measurements, content knowledge and skills, strategies for organizational change and improvement and an understanding of most institutional processes (Erwin, 1991, p. XI).

Assessment and institutional improvement, through the use of effectiveness indicators, involves both the process of developing commitment to the need for improvement through the use of assessment techniques and the application of the institutional effectiveness model for assessing outcomes.

Assessment of effectiveness requires a consistent level of understanding about qualitative and quantitative research methods and the patience to develop an institutional understanding about the value of both kinds of research (Erwin, 1991, p. XII).

Erwin, in 1991, outlined the "characteristics of successful assessment programs" which reappear restated in subsequent literature and models as essential ingredients.

> First, successful assessment programs involve many people in the assessment process. ...
>
> Second, there are clear, assessable educational goals and objectives. ...

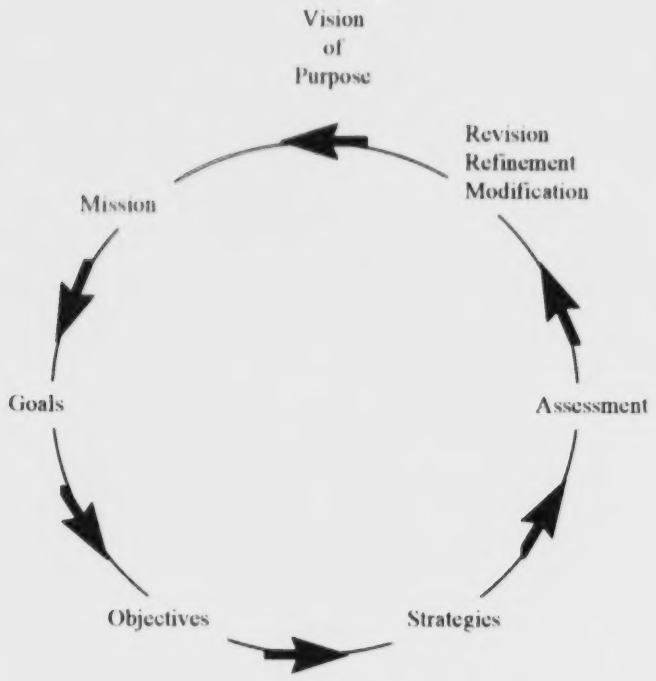
> Third, other constituent groups have been brought into the process. ...
> Fourth, the data collected are meaningful, valuable and accurate. ...
> Fifth, the data are analyzed and not just tallied for compliance purposes. Efforts are made to study what the data mean for the program-what is working well and what needs improving. Programs that merely comply have poor survey return rates, no expectations about students' performances, and no concern about why students performed better or worse.
>
> Last, a system is established for distributing and implementing assessment results so that the results are available to the people who can use them. Moreover, administrators make sure that the results are used. The active assessment process is integrated into the planning and evaluation process of the institution and the assessment information and reports support other review efforts, such as accreditation studies, or annual program reviews. In contrast, in unsuccessful programs, assessment information is distributed or understood by no one except the report writer. (Erwin, 1991, p. 24-25)

Institutional Effectiveness as a Cyclical Process

Nichols described the institutional effectiveness paradigm in his 1989 book, Institutional Effectiveness And Outcomes Assessment Implementation on Campus: A Practitioner's Handbook, and again in 1991, in A Practitioner's Handbook For Institutional Effectiveness And Student Outcomes Assessment Implementation. He described the elements of the cyclical process as containing: (a) Expanded mission statement; (b) identification of institutional and service objectives; (c) assessment of those objectives and how they are being accomplished; (d) and the revision, refinement and modification of those objectives based on assessment results. (Nichols, 1991).

The following cyclical process is a visual interpretation of this institutional effectiveness paradigm as described and used by a number of institutional effectiveness models.

Figure 1
Cyclical Process of The Institutional
Effectiveness Model



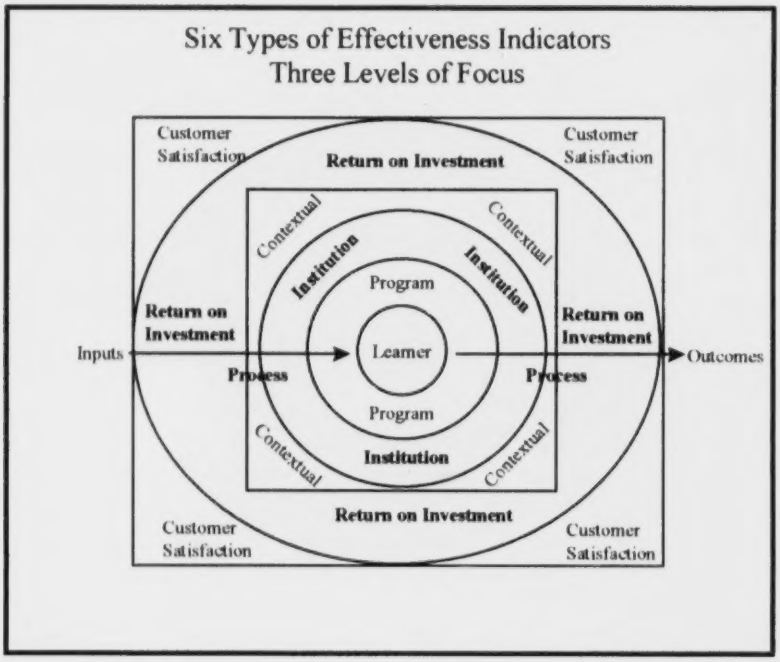
Institutional Effectiveness as a Model

Models of institutional effectiveness appear to be focused on the general philosophical principles which utilize much of Edward Deming's philosophy of continuous improvement as an ongoing premise. Deming, often noted for being the father of Total Quality Management (TQM), based much of his drive for improvement as a focus on customers needs, assessment and continual improvement, and an understanding of systems. All of these are active ingredients in the process of doing assessment about effectiveness and the use of that information for institutional change and improvement (Deming, 1993).

Reasons for using effectiveness indicators at the state or local level can vary significantly. Purposes include compliance, persuading, monitoring, improving and judging. From these purposes various indicators are used to identify success.

Effectiveness indicators may be categorized into six general types. First, "inputs" such as equitable access to institutions measured by enrollment. Second, "process indicators" such as climate studies and specialized accreditation studies. Third, "outcomes indicators" are currently the most common indicators used, include job placement rates, transfer and graduation rates. Fourth, "contextual indicators" are used and include funding level per FTE or facilities. Fifth, "return on investment" indicators are used to identify the net benefit of participating in a community college education based on the cost of participation. Sixth, "customer satisfaction" indicators are used and include student and employer, or transfer institution satisfaction (Ewell & Jones, 1994, p. 10-12).

Figure 2
Six Types of Effectiveness Indicators:
Three Levels of Focus



Most institutional models use a variety of indicators or categories of indicators in their models of institutional effectiveness, and although outcomes indicators are most common, inputs, process, outcomes, contextual, return on investment, and customer satisfaction indicators are all employed (Ewell & Jones, 1994).

Definition of Terms

Community colleges are defined here as those two year public institutions or baccalaureate institutions accredited to offer associate degrees. Proprietary institutions that may also offer associate degrees are not included in the study.

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The language of assessment as with other segments of education carries with it a number of useful but specifically defined terms. In this study about institutional effectiveness the following definitions are used for clarification and understanding:

1. Institutional Effectiveness (or) Effective Community Colleges are defined as engaging

> ...in successful transactions with important groups (public). They are able to compare the results achieved (performance) with needs and expectations. They provide information about performance in ways that build understanding (perception) of their mission and purpose. Effectiveness suggests that a college has a discernible mission, is producing outcomes that meet constituency needs, and can conclusively document the outcomes it is producing as a reflection of its mission. (AACC, 1994)

2. Assessment is defined as "...the process of descriptively evaluating the product of the institution in an objective manner" (McLeod & Atwell, 1992, p. 31).

3. Baseline "...is simply a beginning measure of a given indicator" (McLeod & Atwell 1992, p. 31).

4. Benchmark in comparison to baseline is "...an absolute standard as opposed to a normative one" (McLeod & Atwell, 1992, p. 32).

5. Indicator is "...a concrete piece of information about a condition or result of public action that is regularly produced, publicly reported, and systematically used for planning, monitoring, or resource allocation at the state or system level" (Ewell & Jones, 1994, p. 7). Indicators for the purpose of this study will be confined to local institutional use.

6. Core indicator "...is a measure that describes a critical, widely recognized outcome of mission, one that is clearly responsive to key constituent groups and is regularly produced" (AACC, 1994, p. 9).

7. Change is defined as comparing data over time. "Thus, change in indicators, or lack of change, is important for reaching conclusions about the effectiveness of an institution.

Key to this is that the same kind of data must be kept for comparison over extended periods of time" (McLeod & Atwell, 1992, p. 32).

8. Family measure is defined as measurements representing "...a complex phenomenon with multiple measures, '...in that they are each separate entities, but they are related to one another. Together, they represent the entire situation. A family of measures clearly provides more, and more discrete, information about the total unit performance than a single measure, and this is more compatible with decision making in a context where trade-offs are common' (Brinkeroff & Dressler, 1990, p. 37)" (McLeod & Atwell, 1992, p. 33).

9. Mission is "...the second descriptive level of productivity for an institution. Whereas the initial statement of purpose is the first and is normally defined externally, usually in law, mission is usually internally defined" (McLeod & Atwell, 1992, p. 35).

10. Objective is "...a written, active and operational subdivision (sometimes referred to as a specific objective) of a production goal. It must be well defined and, above all, measurable in its accomplishment. An objective should be specific respective to what is to be done, who is to do it, when is it to be completed, how it is to be evaluated and by what measure" (McLeod & Atwell, 1992, p. 35).

11. Outcome is an "...end product. The productivity of an institution. Outcomes should not be confused with indicators. Outcomes are the products to be accomplished by specific objectives; indicators are the data which prove that the objectives have been accomplished" (McLeod & Atwell, 1992, p. 35).

12. Two year colleges or community colleges include two year colleges granting associate degrees, defined here as community colleges who have undergone a full self study

required for accreditation by the Northwest Association of Schools and Colleges, Commission on Colleges since 1990 when Standard V: Policy #25 was adopted in its current form.

Research Design

This quantitative study will be based on information collected in a self administered questionnaire using a cross-sectional study of a selected sample of community college administrators in northwest community colleges with the intent of generalizing the information for that population (Cresswell, 1994, p. 11).

This "...quantitative study, consistent with the quantitative paradigm, is an inquiry into a social or human problem, based on testing a theory composed of variables, measured with numbers, and analyzed with statistical procedures, in order to determine whether the predictive generalizations of the theory hold true" Cresswell, 1994, p. 2).

This is an investigative study in a descriptive style using simple descriptive and interactive statistics of relevant data to demonstrate perceived usefulness of institutional effectiveness indicators by administrators for making purposeful institutional change and improvement.

Delimitation

The study will limit its survey to CEOs or community college presidents and primary operational administrators in each institution including primary instructional administrators, primary student services administrators and primary business affairs administrators. The assumption is that accreditation as a requirement has mandated the

use of assessment information as a means to initiate institutional change and improvement. The accreditation requirement should influence the subsequent beliefs and actions of CEOs and primary operational administrators in each institution. These administrators with operational and budget responsibilities should consequently have an influence over the identification and use of assessment information for initiating change. The use of effectiveness indicators as one of the current models using assessment has been identified both in the literature and by accreditation associations as an appropriate model for addressing change and improvement.

Boards of Trustees, although primarily responsible for the policy direction of institutions, were not surveyed based on the premise that the application and use of assessment information to initiate change had already been established as a policy by the accrediting association and therefore the policy direction was established. The application of the policy was subsequently up to the administration of each community college.

The study was limited to CEOs and primary operational administrators based on the assumption that in the operational context of an organization, involving the planning, budgeting and evaluation processes, administrators who possess the budgeting responsibility for operational areas have a significant influence on what functions are supported or not supported and subsequently whether goals can be achieved. "Budgeting is a practical bridge between planning and evaluation. ...Budgets represent the financial crystallization of an organizations intentions. It is through budgeting that a school or school district can decide how to allocate resources so as to achieve organizational goals" (Guthrie, Garms and Pierce, 1988, p. 216).

Therefore, one limitation of the study is that although the study was delimited to designated administrators, there is an obvious understanding that boards could influence the application and use of assessment information in positive and negative ways. The fact still remains that the direction of the policy was defacto established by the accreditation association.

The Study

A survey was conducted with purposely selected administrators at each college including the president, the primary instructional administrator, the primary student services administrator, and the primary business affairs administrator in northwest community colleges who have completed an outcomes based accreditation self study since 1990 when the accreditation requirement began.

The results were used to compare and contrast the perceptions, the use of institutional effectiveness indicators in community colleges and the application of those results for initiating purposeful institutional change and improvement.

Data Analysis

Simple descriptive and inferential statistics were used to analyze the perceived importance of institutional effectiveness indicators, their use in community colleges and whether they are perceived to have use for making purposeful institutional change and improvement.

Significance of the Study

In 1990, the Northwest Association of Schools and Colleges, Commission on Colleges adopted a new standard which moved from an accreditation model based primarily on examining the input of resources into the educational process, to one based on outcomes, their assessment and deliberative attempts at institutional change and improvement.

In Standard V, now Policy 2.2, the commission states:

> ...the necessity of a continuing process of academic planning, the carrying out of those plans, the assessment of outcomes, and the influencing of the planning process by the assessment activities. Assessment which does not result in conscious and deliberative attempts at improvement is rarely worth the effort. (NASC, 1994, p. 51)

Therefore, it is essential that administrators in community colleges, accredited by the Northwest Association of Schools and Colleges, have an understanding of institutional effectiveness models used for the purpose of initiating change, and have the belief that application of these models can produce institutional change or improvement.

Limitations of the Study

The study is limited by the fact that it is a cross-sectional descriptive survey of administrators in northwest community colleges whose institutions have gone through accreditation since 1990 and therefore any generalizations beyond this sample would be limited. The study is limited by the perceptions of those administrators in the sample and may not be reflective of all full and part time administrators in all northwest community colleges. The study is limited by the normal limitations of survey design and research related to this design.

Organization of the Study

Chapter one has presented a review of the background on institutional effectiveness, accreditation requirements, a statement of the problem to be studied, hypothesis, research questions, purpose of the study, definition of terms, significance, delimitations and limitations of the study.

Chapter two reviews appropriate literature pertaining to institutional effectiveness as related to the use of effectiveness indicators and general questions.

Chapter three outlines the methods and procedures used in the research design.

Chapter four presents an analysis of the research data.

Chapter five presents study conclusions and recommendations of the study.

Chapter II: Review of Literature

The foundation for assessment and institutional effectiveness in higher education began before the twentieth century and can be traced to the changes brought about by the Industrial Revolution with its significant impact on our social, cultural and political foundations.

The following sections review the development of institutional effectiveness: first, as a construct derived from organizational effectiveness; second, as a model emanating from program evaluation; third, the forms of evaluation and assessment; and fourth, the application of institutional effectiveness models and the use of effectiveness indicators as required by accreditation and used for institutional change and improvement.

Development of Institutional Effectiveness: Organizational Effectiveness

Organizational Effectiveness is the first construct underlying the theory of institutional effectiveness. Early theorists in the development of organization effectiveness theory defined effectiveness in relation to other constructs or the social, cultural, political and economic thoughts of that period.

The classical theorists of the time emanating from the "classical" school of organizational theorists, including Barnard, Taylor, Weber, Fayol, Gulick and Urwick, defined effectiveness of organizations in terms of "efficiency" (Spray, 1976, p.1). Early studies were based on these theoretical models. When joined with other disciplines of the sciences and social sciences, and applied to organizations, the results were a diversity of characteristics reflected by those theories and applied to organizational performance by

evaluations and measurements of the period (Spray, 1976, p.1). Many models developed after World War II and reflected the advances within many disciplines which implied their theoretical development.

> In recent years the case study tradition, initiated by sociologists such as Blau (1955), Gouldner (1954), Selznick (1949), and Whyte (1948) have been supplemented by a variety of approaches. These include the decision-making model of March and Simon (1958). The criterion approach of Georgopauulos and Tannenbaum (1971), the contingency approach of Lawrence and Lorsch (1967), the structural approach of the Aston group (Hinings and Lee, 1971; Inkson, Pugh, and Hickson, 1970; Pheysey, Payne and Pugh, 1971; Pugh and Pheysey, 1973), and various systems models (Evan, 1972; Katz and Kahn, 1966; Likert, 1961; Taylor and Bowers, 1972). In addition, a host of programmatic approaches, such as operations research, cost/benefit analysis, management by objectives, and various organizational development models, have recently been added to the literature on organizational effectiveness. (Spray, 1976, p. 1-2)

Dubin raised the issue of a "fundamental dilemma" when assessing organizational effectiveness depending on whether one analyzes the organization from inside or outside. He considers the two views, "internal" perspective and "external" perspective. Internally he believes the organization asks "...whether the resources invested are utilized efficiently. Return on investment is typical to measure this type of organizational effectiveness" (Dubin in Spray, 1976, p. 7). Viewed externally, "a radically different view of organizational effectiveness consider the output of the organization, which is evaluated for its contribution to the larger society. Organizational effectiveness from this viewpoint is more likely to be measured by some form of cost-benefit analysis" (Dubin in Spray, 1976, p. 7).

The meshing of these two somewhat conflicting perspectives is present in the eclectic approaches of today's models. Institutions today are interested in internal improvements which may have a relationship to efficiency and outcomes which are usually

the interests of legislators, taxpayers and even accrediting bodies. These external groups, as he indicated, seem to be most interested with outcomes of institutions (Hudgins, 1998; SBCTC, 1997; Borden & Bottrill in Borden and Banta, 1994).

Organizational theory and organizational effectiveness models developed with corollary assessment indicators from the beginning of the twentieth century to date. All aspects of the theory appear to have some influence on the institutional effectiveness models currently promoted by public agencies as well as colleges and universities.

One of the major influences on our current models is systems theory of organizations.

> From the systems theory-perspective, the organization is a social system which, in its interaction with its environment, activates at least four systemic processes:
> 1. Inputs (I) of various types of resources;
> 2. Transformations (T) of resources with the aid of social and/or technical mechanisms;
> 3. Outputs (O) which are transmitted to other systems, and
> 4. Feedback effects (F) whether negative or positive.
>
> To appraise the effectiveness of an organization with the aid of systems theory ... one must measure its performance with respect to all four systematic processes as well as their interrelationships. (Evan in Spray, 1976, p. 19)

With the use of systems theory one can better understand the theoretical basis of today's models which, although eclectic in nature, are based significantly on this theoretical construct of organizations hence educational institutions.

Evan states that,

> ...From the perspective of systems theory of organization, the four systemic processes outlined above suggest a new way of conceptualizing as well as operationalizing organizational effectiveness. A multidimensional concept, organizational effectiveness may be defined as the capacity of an organization to cope with all four systemic processes relative to its goal seeking behavior - however explicit or implicit this may be. (Evan in Spray, 1976, p. 20-21)

Two current models of organizational effectiveness and subsequent variations are based on different paradigms and different assumptions. The goal centered approach is dependent on quantitative measures in most cases and the natural systems approach is dependent on qualitative measures of performance and effectiveness.

The Core Indicators of Effectiveness model developed by AACC, which is the primary foundation for the survey used in this study, more closely follows a goal centered approach and quantitative paradigm. Eclectic approaches using both quantitative and qualitative measures are becoming more popular, particularly at the classroom level of analysis (Angelo and Cross, 1993).

The essence of an institutional decision making model is based on the following assumptions of a goal centered perspective:

> The goal centered view makes a reasonably explicit assumption that the organization is in the hands of a rational set of decision makers who have in mind a set of goals which they wish to pursue. Further, these goals are few enough in number to be manageable and can be defined well enough to be understood. Given that goals can be thus identified, it should be possible to plan the best management strategies for attaining them. Within this orientation, the way to assess organizational effectiveness would be to develop criterion measures to assess how well the goals are being achieved. (Campbell in Spray, 1976, p. 32)

This goals-centered model based on overtones of systems theory of organizations seems to be the current foundation of models being developed for analyzing institutional effectiveness and particularly the approach suggested by the accrediting associations (NASC, 1996). The methods used by institutions in analyzing their effectiveness does vary in practice. Both quantitative and qualitative methods are used in the assessment of effectiveness, although the construct or theory seems to be mostly goal centered.

Other models also exist for analyzing organizational effectiveness but are generally based on either a goal centered or natural systems construct. These models include: "Cost/ Benefit Analysis," "Management by Objectives," "Organizational Development Model," "Likert ISR Model," and the "Industrial/Organizational Psychology Criterion Model" (Campbell in Spray, 1976, p. 32-35).

Development of Institutional Effectiveness: Program Evaluation

Program Evaluation: 1800 - 1900

The foundations of program evaluation and consequently assessment, partially originated in the United States but more importantly in England. It began not in collegiate education but in primary education. "The Royal Commission of Inquiry into the Primary Education in Ireland under the Earl of Powis..." was one of the first official commissions set up to perform evaluation (Madaus, Stufflebeam & Scriven in Stark & Thomas, 1994, p. 24).

Other early forms of evaluation starting in Great Britain during the mid 19th century included associations which formed societies to evaluate the social problems of the day such as sanitary conditions of the working poor. Formal bureaucracies were developed to review the programs through enquiry committees (Madaus, Stufflebam & Scriven in Stark & Thomas, 1994, p. 24).

In the United States, official evaluation of schools performance began as early as 1845, through the use of student exams as a method of program evaluation. Horance Mann, among others, began to collect the test scores as an early method of evaluating the

effectiveness of programs and headmasters. Joseph Rice is credited with conducting the first long term educational program evaluation from 1887 to 1898, on the methods used in spelling instruction. Formal accreditation, somewhat as we know it today, began as early as the late 1800s when the North Central Association of Colleges and Secondary Schools was established (Madaus, Stufflebeam & Scriven in Stark & Thomas, 1994, p. 24-25). Four regions developed accrediting associations during these years but all were well established by the 1930s. The focus of this study, the Northwest Association of Schools and Colleges, was established in 1917 has been recognized by the U.S. Secretary of Education since 1952 as a nationally recognized accrediting agency (NASC, 1996).

Program Evaluation: 1900 - 1930

During the early stages of the twentieth century "...'scientific management became a powerful force in administrative theory as well as in industrial circles' [Biddle & Ellena, 1964; Callahan, 1962; Creanin, 1962.]. The emphasis of this movement was on systemization; standardization; and most importantly, efficiency" (Madaus, Stufflebeam & Scriven in Stark & Thomas, 1994, p. 25). Some of the more familiar subjects of assessment began at this time including studies on expenditures, dropout rates and the implementation of standardized tests on arithmetic, spelling and English in order to determine quality. During this period early offices of evaluation and measurement began to appear with formalized purposes. Developing from this were early normed formalized tests which enabled comparisons to be made between programs and classes around precise objectives. Many of these early forms were used to promote causes of those paying for expertise or trying to maintain the status quo. Although many evaluators were trying to

take the high road, most evaluations of this early period were localized and addressed local questions and not until later years did the generalization of the evaluations get addressed (Madaus, Stufflebeam & Scriven in Staark & Thomas, 1994, p. 25-26).

Program Evaluation: 1931 - 1945

The third significant period in program evaluation is 1931 - 1945, known as the age of Ralph W. Tyler. Tyler's famous "Eight Year Study" evaluated the performance of intended versus actual outcomes of students attending traditional high schools and compared them to progressive schools based on their performance at cooperating colleges and universities. This "...approach calls for the measurement of behaviorally defined objectives, it concentrates on learning *outcomes* instead of organizational and teaching *inputs* ..." (Madaus, Stufflebeam & Scriven in Stark & Thomas, 1994, p. 27). This became the foundation for testing and evaluation for at least 25 years and is very close to the current outcomes based models suggested by institutional effectiveness literature and accreditation requirements since 1985 (NASC, 1996).

Program Evaluation: 1946 - 1957

The fourth significant period marks an expansion of all education, personnel and facilities including experimental and community colleges (Madaus, Stufflebeam & Scriven in Stark & Thomas, 1994, p. 27). During this period of growth, there was little concern about accountability in education. Although this period did not complete many program evaluations for accountability, it did expand technical standardized testing and standards

for evaluations. During this period the Educational Testing Service developed as well as other professional association standards around testing and evaluation.

During this same period, based on much of Tyler's work, was the development of "taxonomies of program objectives" and programs to help faculty and staff create and evaluate specific program objectives (Madaus, Stufflebeam & Scriven in Stark & Thomas, 1994, p. 28). This was, however, still a localized and non-publicly supported venture.

Program Evaluation: 1958 - 1972

The fifth period, 1958-1972, grew from a quiet and subdued age into one calling for large scale projects and evaluations dependent on taxpayer support. The reaction to the scientific advantage demonstrated by the USSR with the launching of their first satellite called Sputnik, fueled the race for space and the launching of the National Defense Education Act of 1958 (Madaus, Stufflebeam & Scriven in Stark & Thomas, 1994, p. 29; Gutek, 1986).

New programs supported by federal funds included counseling and guidance as well as program evaluation. Program evaluations previously developed and refined were still used. Tyler's behavioral objectives, evaluations and standardized tests were all used as well as professional judgment and field experiments. Although all forms of evaluation were used, little seemed to be known about program effectiveness. Cronbach, in 1963, criticized evaluators for post hoc evaluations and asked researchers to examine and report findings which could be used to help guide curriculum and program changes (Madaus, Stufflebeam & Scriven in Stark & Thomas, 1994, p. 29). The "War On Poverty," President Johnson's new social program included educational programs and required

specific program evaluation to determine their effectiveness. The Elementary and Secondary Education Act of 1964, Title I required program evaluation to be used in practice (Gutek, 1986).

The standardized test approach could not be used successfully because it could not measure outcomes directly or the different objectives from area to area encouraged by the Tylerian model.

New theories and methods had to be developed to evaluate the outcomes of education. New methods included a reformed Tylerian model of criterion-referenced testing, called systems-analysis. Others, such as Scriven, Stufflebeam, and Stake "...introduced new models of evaluation that departed radically from prior approaches. These conceptualizations recognized the need to evaluate goals, look at inputs, examine implementation and delivery services as well as measure intended and unintended outcomes of the program" (Madaus, Stufflebeam & Scriven in Stark & Thomas, 1994, p. 31). Because many important studies found negative results in many of the popular educational and public programs of the day a separation between evaluation and research and testing began to occur.

Program Evaluation: 1973 - 1980

The sixth period developed during this time of separation and search by program evaluators for their own identity and professionalism. The period was filled with "...confusion, anxiety, and animosity. Evaluation had little stature and no political clout" (Madaus, Stufflebeam & Scriven in Stark & Thomas, 1994, p. 31). The period grew in professionalism with the advent of many new journals which "...proved to be excellent

vehicles for recording, and disseminating information about the various facets of program evaluation" (Madaus, Stufflebeam & Scriven in Stark & Thomas, 1994, p. 31).

Colleges and universities began to offer courses to complete programs in the development of the profession. Much of the professional discussion during this period hinged on appropriateness of positivistic/quantitative versus phenomenological/qualitative approaches to evaluation and their related arguments (Madaus, Stufflebeam & Scriven in Stark & Thomas, 1994, p. 32).

Program Evaluation: 1981 - 1995, A call for Education Reform through Evaluation and Assessment

The seventh period marks the development of evaluation and assessment models in response to the call for education reform in the 1980s. Several major reports of the mid 1980s called for educational reform. These included, To Strengthen Quality in Higher Education: Summary Recommendations of the National Commission on Higher Education Issues (1982), and A Nation at Risk: The Imperative of Educational Reform (Bennett, 1983). These studies called for excellence in education and references to assessment as a mechanism for improvement (Nichols, 1991). Access to Quality Undergraduate Education by the Southern Regional Education Board, 1985, identified the linkage between basic skills deficiencies and the need for remediation of college freshman. Involvement in Learning: Realizing the Potential of American Higher Education, Final Report of the Study Group on the Conditions of Excellence in American Higher Education by the National Institute of Education in 1984, proposed " . . . that individual student learning can be significantly enhanced through frequent communication about

performance...[and that]...institutions can also 'learn' through information about results and can make continuous improvements in response" (Ewell in Stark & Thomas, 1994, p.41), (NIE, 1984).

Two additional reports, Integrity in the College Curriculum by the Association of American Colleges in 1985 and To Reclaim a Legacy: A Report on the Humanities in Higher Education by Bennett in 1984, "...are more traditionally focused in curricular content and structure. Here the curricular connection to assess lies largely in the felt need for intensive, integrative demonstrations of student knowledge and capacities (similar in structure to the comprehensive examinations typical of earlier undergraduate liberal arts curricula) to complete and certify the process of undergraduate instruction" (Ewell in Stark & Thomas, 1994, p. 41; Nichols, 1991; Bennett, 1984).

In 1985 Secretary of Education William Bennett indicated that "colleges should state their goals, measure their success in meeting those goals, and make the results available to everyone.... If institutions don't assess their own performance, others - either state or commercial outfits - will most likely do it for them" (Bennett, 1985, p. 25; Bennett in Nichols, 1991). In 1986, the Council on Postsecondary Accreditation (COPA) issued Educational Quality and Accreditation: A Call for Diversity Continuity and Innovation which asked institutions to

- sharpen statements of mission and objectives to identify intended educational outcomes.
- Develop additional effective means of assessing learning outcomes and results.
- Use the self evaluation and peer review process of accreditation as an integral part of ongoing planning and institutional or programmatic change. (COPA, 1986, p. 12)

It then asked accrediting bodies to evaluate these standards and achievements during the peer review process.

The federal government in its recognition of the Council on Postsecondary Accreditation (COPA) in 1987, marked a fundamental change in accreditation policy and adopted an institutional effectiveness or outcomes assessment model for accreditation (Nichols, 1991).

The federal change in accreditation policy was a focus on educational effectiveness and outlines that an accrediting agency insure that institutions maintain clearly specified educational objectives consistent with its mission through measuring its outcomes such as: "...satisfaction with certificate and degree requirements by all students... demonstrated educational achievement as assessed and documented through appropriate measures; ...determining that institutions or programs document the educational achievements of their students; [and]...determining the extent to which institutions or programs systematically apply the information through the measures described..." (Federal Register CFR Part 602 in Nichols, 1991, p. 5). In 1992, COPA's task force on Institutional Effectiveness reiterated these points in several additional papers (Ewell, 1992, p. 9).

In addition to these commissions' reports and special studies, state government became active in the call for education reform based on

> ...the need to understand the performance of higher education in relation to the expenditures began to call for more and more performance criteria as a way of understanding and even supporting higher education. (Ewell in Stark & Thomas, 1994, p. 42)

In 1986 two major reports in this external environment were released, Transforming The State Role in Undergraduate Education: Time for a Different View

(Education Commission of the States, 1986) and Time for Results (National Govenors' Association, 1986). Consistent with prior academic improvement reports, these documents highlighted the use of assessment as a tool for reform. "...Both maintained that information on college student performances should be publicly available and comparable across institutions, should be used to inform policy and resource allocation decisions at the state level and should be appropriate to inform consumer choice on the part of students and their parents in the decision of which college to attend" (Ewell in Stark & Thomas, 1994, p. 42; Nichols, 1991; National Governors' Association, 1986, p. 161).

> In 1988 the AACC Commission on the Future of Community Colleges issued the landmark report Building Communities: A Vision for a New Century. With statements such as 'The community college should be the nation's premier teaching institution. Quality instruction should be the hallmark of the movement' (p. 25), the Building Communities report helped usher in more than another document in recent community college literature, the emphasis on teaching and learning. (O'Banion, 1994, p. 22)

In conjunction with the goal of being the "nation's premier teaching institution" Building Communities asked the related assessment question, "What can be done to improve student outcomes and the effectiveness of the institution?" In response to this question AACC recommended several goals for assessment:

> [First,] ... that classroom evaluation be the central assessment activity of the community college; [second,] ...that each community college develop a campus-wide assessment of institutional effectiveness. Such a program should include a periodic reexamination of mission and goals, specific programs, individual student outcomes, retention rates and the performance of graduates; [third,] ...those outcomes should be clearly related to the mission of the college and to an informed understanding of the educational needs and goals of the college's student population. (AACC, 1988, p. 47-48)

By 1990, based on accreditation requirements from the federal level and public policies and pressure, all regional accrediting associations including the Northwest

Association of Schools and Colleges had adopted some form of outcomes based accreditation or institutional effectiveness models following the initiative set by the Southern Association of Schools and Colleges as early as 1985 (Nichols, 1991; NASC, 1994).

The result of this intensive external involvement by state legislators and state educational agencies mandated assessment testing in a variety of formats within higher education. The involvement by state legislatures ranged from unfunded mandates to fully funded assessment programs. This context set the stage for the adoption of outcomes assessment by regional accrediting associations in the late 1980s and early 1990s as exemplified by Standard V, Policy Statement #25, now Standard 2, Policy 2.2 of the Northwest Association of Schools and Colleges, Commission on Colleges. Standard V, in essence requires outcomes assessment evaluations in self studies as a mandate of the accreditation process.

This outcomes based assessment or institutional effectiveness model closely follows the "institutional effectiveness paradigm" developed by Nichols in the 1980s which called for:

1. A sharpened statement of institutional mission and objectives.
2. Identification of intended departmental/programmatic outcomes or results.
3. Establishment of effective means of assessing the accomplishment outcomes and results.

Added to this, implicitly, is the use of the assessment results to improve the function of the institution or program. (Nichols, 1991, p. 10-12)

Davis also broadly defined the current meaning of assessment and evaluation by merging the forms of assessment and evaluation "...into a common effort to understand and judge the merit and worth of teaching and learning within a course, curriculum,

educational program, sequence of study, department, unit, or institution " (Davis in Stark & Thomas, 1994, p. 47).

Forms of Evaluation or Assessment

Gardner described five basic kinds of evaluation used in education: "...(1) evaluation as professional judgment, (2) evaluation as measurement, (3) evaluation as the assessment of congruence between performance and objectives (or standards of performance), (4) decision-oriented evaluation, and (5) goal-free/responsive evaluation" (Gardner in Stark & Thomas, 1994, p. 8).

Although, as Gardner explained, there are many more variations of these "...but the principal emphasis or focus of a particular effort will almost always be identifiable as belonging to one of these categories" (Gardner in Stark & Thomas, 1994, p. 8).

The five basic kinds of evaluations are used throughout all forms of assessment as they are in the various forms of evaluation of institutional effectiveness found in current models.

"Professional judgment," the first form of evaluation, is used in some of the most common educational evaluations, particularly tenure review, accreditation, national or private funding proposals and articles for publication (Gardner in Stark & Thomas, 1994, p. 9).

"Evaluation as Measurement ... traditional (but narrow) simply equates evaluation to measurement. To evaluate means to measure results, effects, or performance using some type of formalized instrument which produces data that can be compared to some sort of standardized scale" (Gardner in Stark & Thomas, 1994, p. 10).

Gardner continued to explain that even experts "...such as Thorndike [16] and Ebel [6,7] admit that the evaluation involves a judgment of merit which extends beyond the collection of measurement data, but the focus of this approach is clearly on those data and the instruments used to collect them" (Gardner in Stark & Thomas, 1994, p. 10). The results of these studies could be compared using standardized scales or comparability of multiple uses of the same questionnaire. The Scholastic Aptitude Test and Graduate Record Exam are traditional normed referenced examples. Indicators of effectiveness used by educational institutions to measure outcomes usually include the number of degrees granted, transfer rates and vocational placement rates. "The expected outcome from the measurement type of evaluation is a number or set of numbers which can be compared and interpreted with reference to another set of numbers, or a generally accepted standard scale" (Gardner in Stark & Thomas, 1994, p. 11).

The "assessment of congruence between performance and objectives" (Gardner in Stark & Thomas, 1994, p. 11) evolves from Tyler's foundation work in evaluation and the behavioral theories related to education. "Theories or methodologies that fall into this category basically define evaluation as the process of specifying or identifying goals, objectives or standards of performance; identifying or developing tools to measure performance; and comparing the measurement data collected with the previously identified objectives or standards to determine the degree or discrepancy or congruence which exists" (Gardner in Stark & Thomas, 1994, p. 11). The most common forms of evaluation in this category include "competency based education" where goal oriented topics exist (Gardner in Stark & Thomas, 1994, p. 11).

Scrivens stated "...that this type of evaluation process can play two basic kinds of roles: a formative role (evaluation used to improve an ongoing process or project by providing feedback to the administration in charge), and summative role (evaluation of a completed product). ...Formal evaluation methodologies are required if rational decisions are made as to whether the program or thing should be maintained, improved, expanded or terminated. ..." Gardner continued, "the intended results of an evaluation of this sort are judgment of worth regarding the institution, program, process, or thing based on interpreted comparisons between performance data and objectives (or standards of performance)" (Gardner in Stark & Thomas, 1994, p. 12). Some common forms of measures used in institutional effectiveness models include: transfer institution satisfaction with transfer students which implies the adequacy of their preparation; employer satisfaction with program graduates employed by them; and academic or occupational students satisfaction with their preparation for transfer or direct employment

> Decisions-oriented evaluation includes two models with numerous derivatives.
>
> [The] CIPP [Context, Input, Process, Product] Evaluation Model developed by the Phi Delta Kappa (PDK) National Study Committee on Evaluation and a model developed by the University of California at Los Angeles Center for The Study of Evaluation. The two models are practically identical in their essential characteristics; the CIPP model is based on a definition of evaluation as 'The process of delineating, obtaining, and providing useful information for judging decision alternatives,' [15,p.40] whereas the UCLA definition is stated as 'Evaluation is the process of ascertaining the decision areas of concern, selecting appropriate information, and collecting and analyzing information in order to report summary data useful to decision-makers in selecting among alternatives' [1p.107]. (Gardner in Stark & Thomas, 1994, p. 12)

Some current existing models applying these principles include WICHE/NCHEMS Costing and Data Management System (Gardner in Stark & Thomas, 1994, p. 13). The current institutional effectiveness models imply a relationship between evaluation and

improving institutions although some assessments follow more closely some other forms of evaluation.

What Gardner describes in decision oriented evaluation is closely aligned with the intent of current institutional effectiveness models:

> The desired outcomes of an evaluation of this kind are a continual exchange between evaluators and administrators regarding information needs associated with critical decisions, and a continuous flow of systematically collected, timely, and relevant information to satisfy those needs. Final interpretation of data is generally assumed to be the responsibility of the administrator(s) served, as, for example, when the final report on grade statistics is placed in the hands of the academic vice-president who is looking for evidence of grade inflation. The evaluator's interpretive skills are brought to bear more on issues related to data reduction and extraction (synthesis) than on meaning as it relates to decisions affecting institutional policy. (Gardner in Stark & Thomas, 1994, p. 14)

Goal-free/Responsive Evaluation model is described as an approach used "...to discover and judge actual effects without regard to what the effects were supposed to be" (Gardner in Stark & Thomas, 1994, p. 14). This particular model, which follows the qualitative paradigm and general methodological prerequisites, has generally not been suggested by institutional effectiveness models. This approach is sometimes suggested for use at the program or course level. As Gardner points out, this might be appropriate in some program evaluation such as the arts. "In effect, by including informal investigation and personal testimony as valid tools for evaluation, this approach may help legitimize methods that have had intuitive appeal in many circumstances but have previously received little formal support" (Gardner in Stark & Thomas, 1994, p. 16).

Application of Effectiveness Models and Indicators for Accreditation and Institutional Change and Improvement

The National Alliance of Community and Technical Colleges (NACTC) and the National Center for Research in Vocational Education developed an institutional effectiveness model which became the foundation of subsequent models. The model provides a structure for colleges to address external demands for effectiveness as well as providing information about the performance of their stated mission (Grossman & Duncan, 1988, p. 3). The model responds to both external demands and internal needs of the community college in addressing its effectiveness.

The NACTC "...identified six areas of inquiry that they believed to be generic to the mission of community and technical colleges in America" (Grossman & Duncan, 1988, p. 27). The six areas or issues included access and equity, employment preparation and placement, college and university transfer, economic development, college/community partnerships and cultural and cross cultural development (Grossman & Duncan, 1988, p. 18-19).

The NACTC then developed indicators based on the literature as a logical generation of indicators to measure each area and in turn develop an instrument to measure institutional effectiveness. This model and indicators became the foundation for many subsequent models and reports including the American Association of Community Colleges (AACC) Core Indicators Model which is the primary influence for this survey.

The NACTC most of all believed that the six areas of the model with its 38 indicators provided community and technical colleges the opportunity to express "...their

best and most relevant case to external interests while serving as an accurate self-portrait for their own issues" (Grossman & Duncan, 1988, p. 39).

In 1992, the Council on Postsecondary Accreditation (COPA) members of the task force on Institutional Effectiveness developed several papers on issues related to the assessment of institutional effectiveness and assessment process of institutional accreditation. Peter Ewell analyzed many of the issues surrounding assessment and its use in accreditation and developed several recommendations for resolving inherent conflict between these issues. He recommended several principles for future policy consideration which appear to have been adopted in regional accreditation standards and models such as the AACC Core Indicators model.

The principles are:

- "Assessment should not constitute a 'component' of institutional accreditation, but should rather permeate the entire accreditation process" (Ewell, 1992, p. 24).
- "The primary focus of assessment should be on effectiveness of the institution as a whole" (Ewell, 1992, p. 24).
- "A required focus of assessment should be placed upon student learning" (Ewell, 1992, p. 24).
- "The primary use of assessment evidence in self-study should be to indicate progress, not to supply definitive judgments about quality" (Ewell, 1992, p. 25).
- "The primary focus of assessment should be the degree to which the process is directed and results in continuous improvement" (Ewell, 1992, p. 25).

These principles seem to permeate the current accreditation model and requirements as well as other effectiveness models.

As early as 1984, however, the Southern Association of Colleges and Schools (SACS) had developed an outcomes-oriented accreditation (Hudgins, 1993, p. 42). "Ready or not, community colleges must deal with institutional effectiveness as they seek to reaffirm their accreditation" (Hudgins, 1993, p. 42). This mandate by the first of the accrediting associations based its decision on the fact that quality in education is based on "...(1) the appropriateness of its objectives; (2) the effectiveness of the use of resources in pursuing these objectives; (3) the degree to which these objectives are achieved. Without a clear statement of what education is expected to provide, it is not possible to determine how good it is (in Southern Association of Colleges and Schools, 1989, p. 19.)" (Hudgins 1993, p. 43).

The three basic questions of effectiveness have been slightly revised but drive most current models of institutional effectiveness. The questions are:

1. What is the mission (business) of our college?
2. What are the major results we expect from the achievement of the mission?
3. What specific evidence are we willing to accept that these results have been achieved? (AACC, 1997, p. xii).

Midlands Technical College has used the structure developed by the National Alliance of Community and Technical Colleges (NACTC) to answer the questions of how institutions go about developing and implementing a model for institutional effectiveness.

The six steps developed by NACTC included:

> 1. Establish a strategic planning process; ...
> 2. Articulation of a vision and mission; ...
> 3. Operationalize the planning process; ...
> 4. Develop an evaluation system, and includes [identifying critical areas of success]. Establish indicators and standards by which a college can evaluate its effectiveness in the identified critical areas. ...Determine mechanisms for documenting if the established standards are met; ...
> 5. Using data to improve effectiveness; ...
> 6. Communicate the results. (AACC, 1997, p. xii)

The other important ingredients suggested for a successful model include: "...support of the president and trustees; ...Linkage of assessment to the college mission; ...Involvement of all units of the college; ...Establishment of an organizational structure to monitor and report on effectiveness outcomes; ...Use assessment data for decision making. [And]...adequately fund assessment activities." (AACC, 1997, p. xiii).

Based on this outline for a successful institutional effectiveness model, organizations and institutions continued to debate the issue of institutional effectiveness and related assessment issues during the 1980s and 1990s. AACC in 1994 published a Special Report No. 4 from the Community College Roundtable that was the culmination of many of the discussions during the previous ten year period. The Roundtable included many of the leaders in the institutional effectiveness movement. In its recommendation, the Roundtable based its model of core indicators of effectiveness not only on the literature or from educational leaders in this movement, but also from discussions at the "...annual meetings of AACC, the Community College Consortium, and the League for Innovation in the Community College to sharpen the focus of the core indicators" (AACC, 1994, p. 1).

The thirteen core indicators were based on the six mission categories serving most community colleges. The Core Indicators Model of Institutional Effectiveness developed by AACC also served as the primary basis for the questionnaire used in this study.

The Core Indicators Model of Institutional Effectiveness developed by AACC includes:

Mission: Student progress
- Core Indicator 1: Student Goal Attainment
- Core Indicator 2: Persistence (Fall to Fall)
- Core Indicator 3: Degree Completion Rate

Mission: Career Preparation
- Core Indicator 4: Placement Rate in the Workforce
- Core Indicator 5: Employer Assessment of Students

Mission: Transfer Preparation
- Core Indicator 6: Number and Rate Who Transfer
- Core Indicator 7: Performance After Transfer

Mission: Developmental Education
- Core Indicator 8: Success in Subsequent, Related Coursework

Mission: General Education
- Core Indicator 9: Demonstration of Critical Literacy Skills
- Core Indicator 10: Demonstration of Citizenship Skills

Mission: Customized Education
- Core Indicator 11: Client Assessment of Programs and Services

Mission: Community Development
- Core Indicator 12: Responsive to Community Needs
- Core Indicator 13: Participation Rate in Service Area (AACC, 1994)

The models "...can serve as a guide for a college developing its institutional effectiveness process. Each college must personalize the process and develop a model that is relevant to its mission, service region and college values" (AACC, 1997, p. xiii).

The seven practical outcomes achieved by developing and implementing an institutional effectiveness model include:

- Clarification of mission
- improved use of resources
- identification of priorities
- improved performance
- increased return on resources invested
- enhanced reputation
- energized work environment. (ACCC, 1997, p. XV)

Arthur Cohen in an extensive review of institutional effectiveness studies suggests that "...the validity of the indicators is suggested by the extent to which they reflect the colleges' basic missions; they provide for a continual report on institutional effects" (Cohen, 1994, p. 1).

There are three important facets to current indicators used in institutional effectiveness models: (a) they are easily understood by the internal and external college community and display evidence that community colleges are doing a good job; (b) the data is reasonably available both in time and fiscal resources; and (c) the indicators are primarily for use by the college community in reviewing its success relative to its mission (Cohen, 1994, p. 2).

College Assessment of Institutional Effectiveness in the 1990s

In order to determine the state of institutional assessment, a review was conducted of thirty research projects completed in the early 1990s. The projects were classified in several ways. First they were classified by facts: was the research theory or model development; was it applied research; or was the research centered on a single or multiple

institution. Second, the purpose of the assessment research was determined and classified by the purpose of the research which included compliance, persuading, monitoring, improving or judging. Third, the types of indicators assessed in the research were determined. This was important since the current focus of institutional effectiveness is generally focused on outcomes, even though other types of indicators are used. Other important indicators include input, process, contextual, return on investment, and customer satisfaction.

The review of research projects was important to this study since it portrays the actual practices or behavior taking place in education during the early 1990s transition period. Although this is not intended to be a statistically quantifiable analysis, it does lend weight and description to the landscape evolving in education during this period. By 1990, all regional accreditation associations had adopted assessment requirements aimed at outcomes and improved institutional effectiveness. This change should have begun to affect community college and administrative behavior and is the focus of this study.

Evaluation of Current Assessments

Table 1
Evaluation of Current Assessment

Category	Percentage of Utilization
(A) FACTS	
Theory or Model Development	20%
Applied Research	87%
Single Institution	33%
Multiple Institution	67%
(B) PURPOSE	
Compliance	20%
Persuading	7%
Monitoring	40%
Improving	63%
Judging	17%
(C) TYPE OF INDICATORS USED	
Input	30%
Process (Environment)	40%
Outcomes	93%
Contextual	10%
Return on Investment	3%
Customer Satisfaction	37%

See Appendix A for details.

Note: Categories are not mutually exclusive but represent the possibility of multiple uses.

The results of this analysis of institutional research articles of institutional assessment and institutional effectiveness indicate that the majority are primarily engaged in applied research, as one might expect with many projects involving more than one institution.

The period of the early 1990s was still a time of defining institutional effectiveness and assessment as it relates to accreditation and other outside political forces which might account for the number of projects involving model development and multiple institutional involvement.

The purpose of assessment was probably the most significant finding in the review of research projects and supports the purpose of regional accreditation requirements which in essence expects community colleges to adopt institutional effectiveness models. The intent of these requirements is to improve institutions and 63% of projects supported this intent. Monitoring a closely related concept was represented in 40% of projects.

The types of indicators mandated for use in determining institutional effectiveness and required by accreditation has moved generally from the input side of the equation towards one of outcomes, although other types still have merit for certain purposes. Colleges have clearly heard the call for outcomes based research, and this was represented in 93% of projects. Process indicators, also important to many activities in colleges, were represented in 40% of projects with customer satisfaction represented in 37% of projects.

Since regional accreditation standards had not yet fully required outcomes based measures until 1990, including those of the Northwest Association of Schools and Colleges, the reflection of 30% of projects involving input indicators is an expected holdover from earlier years. Contextual indicators were found in 10% of projects and return on investment in only 3% of the reviewed projects. These two indicators appear less in the institutional projects and are probably more common at the state or system level analysis. What is clear in this review of research projects is that most assessment is applied; that the majority are completing assessments for institutional improvement and

that most indicators used are either outcomes, process, customer satisfaction or combination of the same for determining the effectiveness of institutions.

The move towards outcomes based regional accreditation models for determining institutional effectiveness and continuous improvement is the current state of accreditation self study requirements. This still leaves unanswered the question, how far have we come in this movement and are we really assessing outcomes in our community colleges as mandated by accreditation and in turn using the information to initiate institutional change.

By 1997 most state governing/coordinating agencies had assessment measures as a part of state policy or regulation. In 1997, Nisson completed a survey of all state governing or coordinating agencies and stated four findings in the Emerging Vision of Accountability for College Improvement,

These findings included:

- Two year colleges in half the states are being required by legislature or Board to address the following question: Are colleges providing the benefits they are meant to provide and are they doing it in an increasingly effective manner or increasingly efficient manner?
- While improvement is implicit everywhere, Washington and Missouri are the only states with an explicit requirement to demonstrate improvement prior to release of some part of funding.
- Clear everywhere that accreditation is not addressing this external concern.
- Raise issue of whether system can show two faces (external reporting to address above need and internal efforts such as part of accreditation and outcomes assessment) without being two-faced by connecting these two efforts. (SBCTC, 1997, p. 1)

The intent of this study is to determine how far community colleges, accredited since 1990 by the Northwest Association of Schools and Colleges, have come in the use of effectiveness indicators for initiating institutional change.

Chapter III: Methods and Procedures

Purpose

The purpose of this study is to examine in selected northwest community colleges that have gone through accreditation since 1990, the perceived importance of using effectiveness indicators for assessing institutional outcomes and investigate their congruence with actual or potential use for making institutional changes and improvements.

Hypothesis

There seems to be a positive relationship in many community colleges between the identification and use of institutional effectiveness indicators and institutional change and improvement.

Design

This "...quantitative study, consistent with the quantitative paradigm, is an inquiry into a social or human problem, based on testing a theory composed of variables, measured with numbers, and analyzed with statistical procedures, in order to determine whether the predictive generalizations of the theory hold true" (Cresswell, 1994, p. 2).

Cresswell suggested considering "quantitative methods as consisting of two types:

> **Experiments** include true experiments with the random assignment of subjects to treatment of conditions and quasi experiments that use nonrandom designs (Keppel, 1991). Included within quasi experiments are single-subject designs.

> **Surveys** include cross-sectional and longitudinal studies using questionnaires or structured interviews for data collection with the intent of generalizing from a sample to a population (Babbie, 1990). (Cresswell, 1994, p. 10-11)

This study has been based upon a review of the research literature and on information collected in a survey using a cross-sectional and field-tested study of a purposely selected sample of administrators and their views about the perceived importance of using effectiveness indicators for assessing institutional outcomes and congruence with actual or potential use for making institutional changes and improvements. The intent of the study will be to generalize the information for this select population of community college administrators (Cresswell, 1994, p. 11).

This investigative study is done in a descriptive style using simple descriptive statistics of relevant data to demonstrate the perceived importance of using institutional effectiveness indicators for making purposeful institutional change and improvement.

General and Research Questions

Two general questions were examined in the study.

1. What kind of purposely selected effectiveness indicators are suggested by the accreditation process and related literature, and can be used to base institutional effectiveness assessment?
2. What does the research literature have to say about the use of effectiveness indicators in assessment practices and for making institutional change?

Six research questions were examined in the study.

1. Do community college administrators believe they <u>should use</u> effectiveness indicators for initiating institutional change?

2. Since the last community college regional accreditation (1990 or later) have community college administrators used effectiveness indicators for initiating institutional change?
3. Do community college administrators believe that the use of effectiveness indicators led to positive changes in their institutions?
4. Is there a difference by community college administrative position in the perception about the perceived importance of using effectiveness indicators for initiating institutional change?
5. Is there a difference by community college administrative position in the use of effectiveness indicators for initiating institutional change?
6. Is there a difference by community college administrative position in the perception that the use of effectiveness indicators led to positive changes in the institution?

The Study

A survey was conducted with purposely selected individuals at each institution including the president, primary instruction administrator, primary student services administrator, and primary business affairs administrator in northwest community colleges that have completed an outcomes based accreditation self study since 1990.

The results of this survey have been analyzed by administrative position to compare and contrast the perceptions and use of institutional effectiveness indicators in community colleges and the application of those results by administrators in making purposeful institutional change and improvement. The survey did not attempt to define

which effectiveness indicators were most useful for making institutional changes or improvements or which strategies might best apply. There is no attempt in this study to determine a cause and effect relationship to actual changes and improvements.

Data Analysis

Simple descriptive statistics have been used to analyze the perceived importance of institutional effectiveness indicators and whether they were perceived to have potential use for making purposeful institutional change and improvement.

Dependent Variables

Three dependent variables were examined in the study:

1. The extent to which colleges should use effectiveness indicators for making institutional changes was measured by the responses of community college administrators responding to the belief that they should use indicators to initiate changes at their respective community college.
2. The extent to which colleges are using effectiveness indicators for initiating institutional changes was measured by the response of administrators as to their use of indicators to initiate change at their respective community colleges.
3. The extent to which they believe the use of effectiveness indicators led to positive changes at their community colleges was measured by the number of positive responses to the Likert type scale by community college administrators.

Survey

A survey form of educational research was used to conduct the study through the use of a mailed questionnaire. In education "...survey research utilizes a variety of instruments and methods to study relationships, effects of treatments, longitudinal changes, and comparisons between groups" (Borg & Gall, 1989, p. 417).

The population studied was the entire administrative population as defined in those institutions meeting the study criteria. The study in this case is called a census since the entire population meeting the criteria was included (Borg & Gall, 1989, p. 418).

The questionnaire measured both perceptions and behavior about an educational practice, in the case of the study the use of effectiveness indicators for the purpose of initiating institutional change and improvement. Since this involves attitude, in this case a perception about a benefit of using effectiveness indicators, it used "...a number of items (usually at least 10) in order to obtain a reasonable picture of the attitude concerned" (Borg & Gall, 1989, p. 432).

When measuring a person's attitude it is important to investigate during the "...pretest whether the sample of subjects has sufficient knowledge and understanding to express a meaningful opinion about the particular topic" (Borg & Gall, 1989, p. 432). The pretest sample therefore used two institutions currently completing full accreditation studies and subject to visitation during 1997. The assumption was that given the current accreditation guidelines and requirement on assessment they should be knowledgeable about assessment and the implied changes which can be initiated as a result of the process.

> The implication of these findings is that the respondents' knowledge and expertise is an important factor in interpreting attitude data. Therefore, when planning a questionnaire survey involving attitude measurement you should

> investigate respondents' familiarity with each attitude object covered in the survey. One technique for doing this is to administer an information test to a small sample of respondents similar to those to be queried in the main study, to determine whether they are capable of expressing an informed opinion about the persons, organizations, or educational practices mentioned in the attitude or opinion items. Another strategy often used is to include several information questions at the beginning of an attitude questionnaire to screen out respondents who display little or no knowledge of the attitude object. (Borg & Gall, 1989, p. 433)

The pretest and survey assured a prior knowledge about the probable familiarity with the educational practice since it is required by accreditation during the selected period of the study and they as administrators in these institutions should have knowledge about the educational practice or use of effectiveness indicators being the object of the study (Borg & Gall, 1989, p. 433). If it was not a requirement of accreditation, which they had completed during this period, and as part of accreditation they should use effectiveness indicators for internal planning and decision making, then it should be an integrated activity of the institution. If this were not the case, prior knowledge could not be assumed and the survey would have used a threshold question to screen out respondents unfamiliar with the educational practice as suggested by Borg and Gall, 1989.

In the pretest, the questionnaire was administered to a sample of administrators identified for use in the study in order to improve the meaning and understanding of the questions. The pretest population sample, as suggested by William Belson in Borg & Gall, 1989, was asked to "repeat their understanding of the meaning of the question in their own words. Questions [were] revised and retested until they [were] understood by all or most members of the pretest sample" (Borg & Gall, 1989, p. 435). The process was the same as planned for the actual questionnaire process (Borg & Gall, 1989, p. 435). The questionnaire was reviewed for comment feedback and responses to each item was

explained to determine whether many were left blank or answered in unintended ways. This generally indicates misunderstanding by respondents (Borg & Gall, 1989, p. 435-436).

Field Testing of Survey

The questionnaire was pre-tested on appropriate personnel in two community colleges, Peninsula Community College and Pierce Community College.

Pretests was defined by Babbie as "...initial tests of one or more aspects of the research design. Most commonly, this has meant the administration of a draft questionnaire to a group of subjects, but the concept of pre-testing is more broadly applicable" (Babbie, 1990, p. 220). Pretests can include pre-testing the research instrument, data collection, data processing and analysis. Babbie encourages the use of a "...pilot study - a miniaturized walk-through of the entire study from sampling to reporting" (Babbie, 1990, p. 226). Although the above process is admirable, this research stayed with the more traditional approach of administering and revising the questionnaire with an appropriate group of similar subjects. The early forms of the survey were routed to personnel doing institutional research and those using performance or effectiveness indicators as a means of examining institutional effectiveness. The survey was then pre-tested, or field tested, on two sets of community college administrators as defined in the study but who were not included in the study because they served at institutions accredited by the Northwest Association of Schools and Colleges prior to 1990, they were however, currently completing a full accreditation study during the 1997 year. Focus groups were conducted on the two groups of administrators at two

institutions using open-ended questions to clarify survey questions formatting and issues surrounding the questionnaire.

The questions were modified for clarity and understanding, particularly for issues surrounding content validity. The survey was reviewed, revised and re-administered to the second group of administrators to verify the recommendation for improvement, clarity, and understanding from the first group. The survey in its revised form was then finalized and prepared for distribution.

The Survey Process

The survey questions were to be directed to specific administrators in community colleges accredited since 1990 by the Northwest Association of Schools and Colleges. In order to be sure the survey was addressed to the correct person and position at each community college, a request was sent to each personnel director to obtain the correct names, titles and addresses for each selected administrative position. This list became the official mailing list for the survey.

The survey followed both the development and mailing suggestions of Salant and Dillman, 1994, in order to achieve a good response rate. The questionnaire was developed as a confidential questionnaire, coded to insure accuracy by administrative position as well as institution and to allow for subsequent follow-up letters.

A pre survey letter was sent to each selected person one week prior to the mailing of the survey. The survey was then mailed with a cover letter, questionnaire and return self addressed envelope. A third letter, sent a week later, thanked participants for their assistance and reminding those who had not returned their survey to please do so. (See

Appendix B). The fourth letter was sent approximately three weeks from the first survey mailing with a new cover letter, questionnaire and return addressed envelope, requesting a response and thanking them for their assistance (Salant & Dillman, 1994, p. 138).

The survey process worked as expected with 148 questionnaires returned, or 63.9% from the 232 originally mailed to 59 selected institutions. The number of valid surveys remaining after matching codes with returned responses reduced the original 148 returned surveys to 128 or 55.2% valid survey responses. This was adjusted by 7 for administrators who represent two categories. These 135 respondents became the database for the analysis of the research questions.

The Survey Analysis

Descriptive analysis was used to examine questions one, two and three. Frequency distribution and mean scores were used to determine whether respondents believe indicators of effectiveness should be used, are used and the belief that the use led to positive change at their community colleges.

The perception of value or should be and actual use, and whether the use led to positive change, was evaluated through the use of descriptive statistics based the summation of responses within the six categorical areas: student progression indicators of effectiveness; internal indicators; general education indicators; external indicators, career and customized education; external indicators, community development; and student or client satisfaction indicators. The extent to which administrators valued and used indicators or should use, were used, and whether the use led to positive change, were rank ordered by the mean scores and percentage of positive responses for each categorical area.

Each categorical area was further analyzed to determine which appeared to have the most and least support for initiating institutional change.

Question four: Is there a difference by administrative position in the belief that they should use effectiveness indicators for initiating institutional change and improvement? Question four was further analyzed by testing the null hypothesis: There is no significant difference between community college presidents, primary instructional administrators, primary student services administrators and primary business affairs administrators in the belief that they should use effectiveness indicators to initiate change in their institutions. The question was analyzed by using the one-way analysis of variance, ANOVA, with a fixed design to determine if any significant differences existed between the mean scores of each administrative position. The extent to which they differ was analyzed using each dependent variable "should use" by each effectiveness category and each administrative position as the independent variable. To determine which group means were different the post hoc Boneferroni multiple comparisons test was used and based on a .05 level of significance.

Question five: Is there a difference by administrative position in the use of effectiveness indicators for initiating institutional change and improvement? The question was analyzed by testing the null hypothesis: There is no significant difference between community college presidents, primary instructional administrators, primary student services administrators and primary business affairs administrators in the use of effectiveness indicators for initiating institutional change. The question was examined by using the one-way analysis of variance, ANOVA, with a fixed design to determine if a significant difference existed between the mean scores of each administrative position

The extent to which they differ was analyzed by using the dependent variable are using by each effectiveness category and each administrative position as the independent variable. To determine which group means were different a post hoc Boneferroni multiple comparison test was used and based on a .05 level of significance.

Question six: Is there a difference, by administrative position, in the belief that the use of effectiveness indicators led to positive change in the institution? The question was analyzed by testing the null hypothesis: There is no significant difference between community college presidents, primary instructional administrators, primary student services administrators and primary business affairs administrators in the belief that the use of effectiveness indicators led to institutional change. The question was analyzed by using One-Way Analysis of Variance, ANOVA, to determine if significant differences existed between the mean score of each administrative position. The extent to which they differ was analyzed by using the dependent variable perception of use led to change by each effectiveness category and each administrative position as the independent variable. To determine which group means were difference, the post hoc Boneferroni multiple comparison test was used and based on a .05 level of significance.

Chapter IV: Presentation and Analysis of Data

The purpose of this study was to examine the perceived importance of using effectiveness indicators for assessing institutional outcomes by primary administrators in selected northwest community colleges that have undergone accreditation since 1990, and to investigate their congruence with actual or potential use for making institutional changes and improvements. This chapter presents information collected through a survey method and analyzed around eight questions. General questions one and two are related to the literature review and will not be reiterated in this section. Research questions 1-6 are dependent on the information received and analyzed in the survey of primary administrators in northwest community colleges accredited since 1990, including presidents, primary instructional administrators, primary student services administrators and primary business affairs administrators. These are subsequently referred to as presidents, instructional administrators, student services administrators and business affairs administrators.

This investigative study was done using descriptive statistics of relevant data to demonstrate the perceived importance of using institutional effectiveness indicators for making purposeful change in community colleges. The analysis provides a multidimensional examination of the attitudes and behaviors of primary administrators in northwest community colleges about the perceived importance of using effectiveness indicators, the actual use of effectiveness indicators and the perceived results of using effectiveness indicators as a means for making institutional change in their respective community colleges.

The analysis is presented in the order of the research questions with a short summary at the beginning of each question and an extensive summary at the conclusion of the chapter.

Context of Study

The survey was sent to 232 recipients. The survey sample represented a cross section of both institutions and primary administrators in northwest community colleges. Recipients returned 148 surveys or 63.8%. After removing all possible errors, particularly those who were not targeted by the survey, 128 valid returned surveys, or 55.2%, were used in the analysis, plus 7 duplicated surveys where the primary administrator represented both instruction and student services. The data was replicated for both positions to add equal weight to each primary position. The return rates for presidents was 25 or 42.4%; instructional administrators was 45 or 76.3%; student services administrators was 43 or 72.9%; and business affairs administrators was 22 or 37.3%.

Valid responses were received from various size institutions: 63 participants or 46.7% from institutions with 1-2499 FTE's; 41 or 30.4% from institutions with 2500-4999 FTE's; 22 or 16.3% from institutions with 5000-7499 FTE's; 2 or 1.59% from institutions with 7500-9999 FTE's; and 7 or 5.2% from institutions with 10,000 or more FTE's.

The primary administrators represented institutions from a variety of rural-urban settings as classified by each respondent. This population mix included: rural populations represented 69 participants or 51.1% of valid responses; suburban populations represented 41 or 30.4% of valid responses; and colleges serving a mostly or all urban population

represented 25 or 18.5% of valid responses. Analysis of cross tabulations of administrative position and rural-urban mix indicated valid responses representing each administrative position at community colleges rated as rural, suburban or urban.

Valid responses were also received from primary administrators representing each position in community colleges by FTE size from 1-7499. In FTE categories 7500-9999 three administrative positions were not represented and in community colleges larger than 10,000, business affairs administrators were not represented.

This simple descriptive analysis provides the context or background which represents the northwest community college environment and establishes the context for the analysis of each question.

Survey Categories and Indicator Measures

The survey was based on responses to the following six categories of effectiveness indicators containing 27 different suggested measures, primarily derived from AACC Core Indicators Model, with the exception of Category 3: General Education and Category 6: Student Satisfaction, which were both derived from literature review and institutional practice. The following categories and indicators are those represented in the study.

Category 1: Student Progression Indicators

1. Student goal attainment.
   1a. Measure: Number of students who leave and report their goal for attending college was met.

2. Student persistence (Fall to Fall).
   2a. Measure: Fall Quarter cohort who are still enrolled the following quarter and have not graduated.

2b. Measure: Retention rates of students from quarter to quarter (credit students only).

3. Program completion.
   3a. Measure: Degree and certificate completion rates.

   3b. Measure: Entering degree seeking students who complete a degree over time. Information is updated annually.

Category 2: Internal Indicators

4. Number and rate who transfer.
   4a. Measure: Number of entering students by cohort in a degree program, completing at least twelve credits, who enroll within 2 years at a 4 year college in a degree program.

5. Performance after transfer.
   5a. Measure: Number of community college students transferring compared to native students at 4 year institutions who complete courses with a "C" or better.

6. Success of remedial or developmental students in subsequent related college level course work.
   6a. Measure: Proportion of entering students deficient in one or more basic skills (reading, writing and computation) who complete developmental work within one year and who complete their first college level course with a "C" or better.
   6b. Measure: Number of students who progress from GED, ESL and developmental courses to success in college level courses.

Category 3: General Education Indicators

7. Demonstration of general education outcomes.
   7a. Literacy skills
   Measure: Determined locally by your community college.

   7b. Exposure to and knowledge of the natural world (science).
   Measure: Determined locally by your community college.

   7c. Exposure to and knowledge of the arts and humanities (humanities).
   Measure: Determined locally by your community college.

   7d. Exposure to and knowledge of culture (social science).
   Measure: Determined locally by your community college.

7e. Cultural awareness (pluralism/diversity).
Measure: Determined locally by your community college.

7f. Computational skills.
Measure: Determined locally by your community college.

7g. Critical thinking and research skills.
Measure: Determined locally by your community college.

7h. Application of skills, such as learning into action, community service or service learning.
Measure: Determined locally by your community college.

Category 4: External Indicators: Career and Customized Education

8. Placement rate in the work force.
8a. Measure: Proportion of entering student cohort who achieve a marketable skill by completing three or more courses in an occupational program and who obtain employment in a field directly related to that skill within one year after leaving.

9. Employer assessment of students.
9a. Measure: Proportion of sampled regional employers in a given field who indicate students from your community college have skills equal to or better than other employees.

10. Client/customer assessment of programs and services.
10a. Measure: Survey, focus groups or interviews to determine satisfaction of your customers, such as business and industry, public or private customers, about your programs, activities or services.

Category 5: External Indicators (Community Development)

11. Responsiveness to community.
11a. Measure: Survey, focus groups or interviews to identify community needs, your responsiveness to those needs, and a demonstration that the college has met or satisfied those needs.

12. Participation rate in service area.
12a. Measure: Proportion of local population in service area who have participated in an organized college activity during the past year.

Category 6: Customer Satisfaction

13. Student on customer satisfaction.
    13a. Measure: Survey student satisfaction with preparation for their current employment one year after completing their program.

    13b. Measure: Employer satisfaction with your former students as graduates.

    13c. Measure: University and four year college satisfaction with academic preparation of your transfer students.

    13d. Measure: Student satisfaction with teaching effectiveness.

    13e. Measure: Student satisfaction with Student Services.

Research Question 1

Do community college administrators believe they should use effectiveness indicators for initiating institutional change?

Summary of Significant Findings for Question 1

First, overwhelming support was given by administrators about the value of using effectiveness indicators to initiate change. Support ranged from 85.5% to 97.0%. Second, three categories of indicators were perceived above a 90.0% level by all respondents, to be important as a way to initiate change at their institutions. These categories included: Category 4: External Indicators, Career and Customized Education, Category 6: Customer Satisfaction, and Category 1: Student Progression Indicators. Third, presidents rated highest the value of using Category 6: Customer Satisfaction, at 98.3%. Fourth, instructional administrators rated highest the value of using Category 4: External Indicators, Career and Customized Education, at 97.8%. Fifth, student services

administrators rated highest the value of using Category 6: Customer Satisfaction, the same as community college presidents, at 98.1%. Sixth, business affairs administrators rated highest the value of using Category 4: External Indicators, Career and Customized Education, at 98.6%. This was also the highest rating for any single category by an administrative group.

Presentation and Analysis of Data

The survey asked respondents to rate their perception of six categories of indicators represented by 27 different suggested measures shown above and answer yes or no to the questions. The "yes" answers were scored with the value of one and "no" responses were scored with the value of two. The responses were then averaged and categorized by all respondents and by each administrative position; presidents, instructional administrators, student services administrators and business affairs administrators.

In the calculation of mean scores, yes was coded "1" and no was coded "2", therefore, the lower the mean score the more positive the answer. A mean score of 1 would indicate a 100% yes response rate.

The rank order of the six categories based on the highest percentage of "yes" responses or lowest mean scores is shown in Table 2.

Table 2
Perception of Indicator:
All respondents,
Rank Order

				Rank order by "yes"			
Category	Indicator	n	Mean	Yes		No	
		135		n	%	n	%
Category 4	External Indicators: Career and Customized Education	134.0	1.03	130.0	97.0	4.0	3.0
Category 6	Customer Satisfaction	130.8	1.03	126.4	96.6	4.4	3.4
Category 1	Student Progression Indicators	134.8	1.09	122.4	90.8	12.4	9.2
Category 2	Internal Indicators	124.7	1.12	109.5	87.8	15.2	12.2
Category 5	External Indicators: Community Development	135.0	1.14	116.0	85.9	19.0	14.1
Category 3	General Education Indicators	131.1	1.14	112.1	85.5	19.0	14.5

Table 2 depicts an overwhelming belief by all primary administrators that they should use effectiveness indicators as a means to initiate change at their community colleges. The yes responses ranged from a low mean score of 1.14 and 85.5% for Category 3: General Education Indicators to a mean score of 1.03 and 97.0% for Category 4: External Indicators: Career and Customized Education.

The same analysis by mean scores and percentage distribution was completed for each administrative position in the same manner as Table 2. Table 3 depicts the belief by presidents that they should use effectiveness indicators as a way to initiate change in their community colleges.

The rank order of categories by the highest percentage of "yes" responses and the lowest mean scores is shown in Table 3.

Table 3
Perception of Indicator:
Presidents,
Rank Order

Category	Indicator	n	Mean	Yes		No	
		25		n	%	n	%
Category 6	Customer Satisfaction	24	1.02	23.6	98.3	0.4	1.7
Category 1	Student Progression Indicators	25	1.02	24.4	97.6	0.6	2.4
Category 4	External Indicators: Career and Customized Education	25	1.04	24.0	76.0	1.0	4.0
Category 3	General Education Indicators	24.7	1.09	22.4	90.7	2.3	9.3
Category 2	Internal Indicators	23	1.11	20.5	89.1	2.5	10.9
Category 5	External Indicators: Community Development	25	1.16	21.0	84.0	4.0	16.0

The Presidents' mean scores and distribution of "yes" percentages indicate strong belief in the value of using effectiveness indicators to initiate change at their community colleges. The responses ranged from a low of 1.16 mean and 84.0% yes in Category 5: External Indicators: Community Development, to a high of 1.02 mean and 98.3% "yes, is important" as a way to initiate change, in Category 6: Customer Satisfaction.

Table 4 displays the belief by instructional administrators that they should use effectiveness indicators as a way to initiate change in their institutions. The responses are displayed in rank order of categories by the highest percentage of "yes" responses or lowest mean scores.

Table 4
Perception of Indicator:
Instructional Administrators,
Rank Order

Category	Indicator	n	Mean	Yes		No	
		45		n	%	n	%
Category 4	External Indicators: Career and Customized Education	45.0	1.02	44.0	97.8	1.0	2.2
Category 6	Customer Satisfaction	43.6	1.02	42.6	97.7	1.0	2.3
Category 1	Student Progression Indicators	44.8	1.10	40.2	89.7	4.6	10.3
Category 2	Internal Indicators	41.5	1.10	37.2	89.6	4.3	10.4
Category 5	External Indicators: Community Development	45.0	1.13	39.0	86.7	6.0	13.3
Category 3	General Education Indicators	44.0	1.17	36.7	83.4	7.3	16.6

Instructional administrators, similar to the presidents, indicate a belief that they should use effectiveness indicators to initiate change at their institutions. The mean score and percentage of "yes" responses ranged from a low of 1.17 and 83.4% "yes, is important" in Category 3: General Education Indicators, to 1.02 and 97.8% "yes" responses in Category 4: External Indicators: Career and Customized Education.

Table 5 displays the belief by student services administrators that they should use effectiveness indicators to initiate change at their institutions in rank order of categories by the highest percentage of "yes" responses and the lowest mean scores.

Table 5
Perception of Indicator:
Student Services Administrators,
Rank Order

Category	Indicator	n	Mean	Yes		No	
		43		n	%	n	%
Category 6	Customer Satisfaction	41.4	1.02	40.6	98.1	.8	1.9
Category 4	External Indicators: Career and Customized Education	42.0	1.04	40.3	96.0	1.7	4.0
Category 1	Student Progression Indicators	43.0	1.11	38.2	88.8	4.8	11.2
Category 2	Internal Indicators	39.2	1.14	33.7	86.0	5.5	14.0
Category 5	External Indicators: Community Development	43.0	1.15	36.5	84.9	6.5	15.1
Category 3	General Education Indicators	40.6	1.15	34.3	84.5	6.3	15.5

The yes responses ranged form a low in Category 3: General Education Indicators of 1.15 mean and 84.5% "yes, is important" to a high in Category 6: Customer Satisfaction of 1.02 mean and 98.1% "yes is important." Student services administrators display very strong general belief that they should use effectiveness indicators as a way to initiate change at their community colleges.

Table 6 displays the perception of business affairs administrators for the use of effectiveness indicators to initiate change at their community colleges in rank order of categories from the highest percentage of "yes" responses and the lowest mean scores.

Table 6
Perception of Indicator:
Business Affairs Administrators,
Rank Order

Category	Indicator	n	Mean	Yes		No	
		22		n	%	n	%
Category 4	External Indicators: Career and Customized Education	22.0	1.01	21.7	98.6	.3	1.4
Category 6	Customer Satisfaction	21.8	1.10	19.6	89.9	2.2	10.1
Category 5	External Indicators: Community Development	22.0	1.11	19.5	88.6	2.5	11.4
Category 1	Student Progression Indicators	22.0	1.11	19.6	89.1	2.4	10.9
Category 3	General Education Indicators	21.7	1.14	18.6	85.7	3.1	14.3
Category 2	Internal Indicators	21.0	1.14	18.0	85.7	3.0	14.3

Business affairs administrators, similar to other administrative positions indicate belief that they should use effectiveness indicators to initiate change at their institutions. The belief ranged from a low in Category 2: Internal Indicators, with a 1.14 mean and 85.7% "yes, is important" to a high in Category 4: External Indicators: Career and Customized Education with a mean of 1.01 and 98.6% "yes, is important" as a means to initiate change.

Table 7 shows that administrators responding to the survey indicated strong belief that they should use effectiveness indicators as a way to initiate change at their institutions as indicated by the mean scores being very close to 1.0 which would indicate complete positive response.

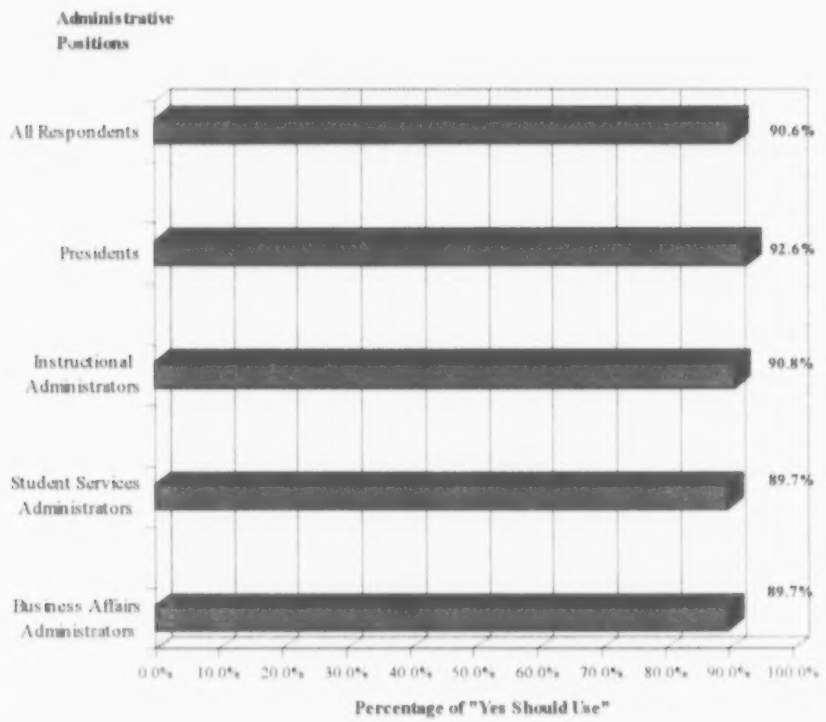
Table 7
Perception of Indicator:
Comparison of Mean Scores
by Administrative Position,
Categorical Order

Category	Indicator	All	Presidents	Instruction	Student Services	Business Affairs
		n=135	n=25	n=45	n=43	n=22
Category 1	Student Progression Indicators	1.09	**1.02**	1.10	1.11	1.11
Category 2	Internal Indicators	1.12	1.11	1.10	1.14	1.14
Category 3	General Education Indicators	1.14	1.09	1.17	1.15	1.14
Category 4	External Indicators: Career and Customized Education	**1.03**	1.04	**1.02**	1.04	**1.01**
Category 5	External Indicators: Community Development	1.14	1.16	1.13	1.15	1.11
Category 6	Customer Satisfaction	**1.03**	**1.02**	**1.02**	**1.02**	1.10

Note: Shaded areas indicate categories with the most positive mean score or scores.

Figure 3 shows the percentage of yes responses by each administrative position ranging from 89.7% to 92.6% positive support.

Figure 3
Percentage of Administrators Believing
They Should Use Effectiveness Indicators
to Initiate Change



Research Question 2

Since the last community college regional accreditation (1990 or later) have community college administrators used effectiveness indicators for initiating change and improvement?

Summary of Significant Findings for Question 2

First, all respondents rated four categories of indicators above the 50% level of usage. These categories included: Category 4: External Indicators, Career and

Customized Education; Category 6: Customer Satisfaction; Category 5: External Indicators, Community Development; and Category 1: Student Progression Indicators. Second, presidents indicated they used Category 6: Customer Satisfaction, the most at 72.0%, as a way to initiate change. Third, instructional administrators indicated they used Category 4: External Indicators, Career and Customized Education, the most at 69.7%, as a way to initiate change. Fourth, student services administrators indicated they used Category 6: Customer Satisfaction Indicators, the most at 63.9%, as a way to initiate change. Fifth, business affairs administrators indicated they used Category 4: External Indicators, Career and Customized Education Indicators, the most at 40.9%, as a way to initiate change. Sixth, the least used category was Category 3: General Education Indicators at 30.6%. Seventh, indicators were used most for input to decision making processes involving planning, improving services, budgeting, accreditation, and program review. Eighth, indicators were used at low levels for decisions regarding improved learning ranked number seven and community accountability ranked number eleven.

Presentation and Analysis of Data

The review of literature clearly indicated the need to establish effectiveness indicators as a means of initiating changes in community colleges. This is reinforced in all regional accrediting standards including the Northwest Association of Schools and Colleges since 1990. One intent of the survey was to investigate whether administrators were in fact using indicators suggested from national models and accreditation standards as a means to initiate change at their institutions.

The analysis of question 3 established the belief by primary administrators that they should use effectiveness indicators to initiate change. Question 4 determines if administrators are actually using effectiveness indicators to initiate change. The following detailed analysis reflects the indicated use of effectiveness indicators as a way to initiate change at community colleges. The information is displayed for all respondents and separately for each primary administrative group.

Table 8 displays the categories of effectiveness indicators in rank order of mean scores and frequency of use by all respondents. The mean scores in the table were calculated with "yes" equal to one and "no" equal to two. Categories with lower mean scores indicate higher usage rates by administrators.

Table 8
Use of Indicators:
All Respondents,
Rank Order

Category	Indicator	n	Mean	Yes		No	
		135		n	%	n	%
Category 4	External Indicators: Career and Customized Education	124.0	1.40	74.7	60.2	49.3	39.8
Category 6	Customer Satisfaction	121.4	1.41	71.4	58.8	50.0	41.2
Category 5	External Indicators: Community Development	117.5	1.49	59.5	50.6	58.0	49.4
Category 1	Student Progression Indicators	123.2	1.51	60.4	49.0	62.8	51.0
Category 2	Internal Indicators	115.0	1.58	48.7	42.3	66.3	57.7
Category 3	General Education Indicators	121.2	1.75	30.6	25.2	90.6	74.8

The mean scores and frequency of use ranges from a low mean of 1.75 and 30.6% use for General Education Indicators to a high of 1.40 or 60.2% use for External Indicators, Career and Customized Education. Three indicators, External Indicators: Career and Customized Education, Customer Satisfaction and External Indicators: Community Development, were used by 50% or more of the administrative respondents. The remainder of categories were used below the 50% level as a means to initiate change at their community colleges.

Table 9 displays the categories of effectiveness indicators in rank order of mean scores and frequency of use by community college presidents.

Table 9
Use of Indicators:
Presidents,
Rank Order

Category	Indicator	n	Mean	Yes		No	
				n	%	n	%
Category 6	Customer Satisfaction	23.6	1.28	17.0	72.0	6.6	28.0
Category 4	External Indicators: Career and Customized Education	24.3	1.31	16.7	68.7	7.6	31.3
Category 5	External Indicators: Community Development	23.0	1.37	14.5	63.0	8.5	37.0
Category 1	Student Progression Indicators	24.2	1.42	14.0	57.9	10.2	42.1
Category 2	Internal Indicators	22.0	1.50	11.0	50.0	11.0	50.0
Category 3	General Education Indicators	24.5	1.64	8.9	36.3	15.6	63.7

The frequency of using effectiveness indicators and mean scores range from a low mean score of 1.64 or 36.6% for Category 3: General Education Indicators to a high mean

score of 1.28 and 72.0% for Category 6: Customer Satisfaction. Indicators with a use exceeding 50% by presidents included five of six categories of effectiveness indicators.

Tables 10 displays the categories of effectiveness indicators in rank order of mean scores and frequency of use by community college instructional administrators.

Table 10
Use of Indicators:
Instructional Administrators,
Rank Order

Category	Indicator	n	Mean	Yes		No	
		45		n	%	n	%
Category 4	External Indicators: Career and Customized Education	40.6	1.30	28.3	69.7	12.3	30.3
Category 6	Customer Satisfaction	40.0	1.38	24.6	61.5	15.4	38.5
Category 5	External Indicators: Community Development	39.0	1.42	22.5	57.7	16.5	42.3
Category 1	Student Progression Indicators	38.8	1.46	20.8	53.6	18.0	48.4
Category 2	Internal Indicators	37.2	1.48	19.2	51.6	18.0	48.4
Category 3	General Education Indicators	37.5	1.73	10.2	27.2	27.3	72.8

The mean scores and frequency of use by instructional administrators range from a low mean score of 1.73 and 27.2% use in Category 3: General Education Indicators, to a high mean score of 1.30 and 69.7% in Category 4: External Indicators, Career and Customized Education. The effectiveness indicators used by instructional administrators above the 50% level include all categories of indicators except Category 3: General Education Indicators.

Table 11 displays the categories of effectiveness indicators in rank order of mean scores and frequency of use by student services administrators.

Table 11
Use of Indicators:
Student Services Administrators,
Rank Order

Category	Indicator	n	Mean	Yes		No	
		43		n	%	n	%
Category 6	Customer Satisfaction	38.2	1.36	24.4	63.9	13.8	36.1
Category 4	External Indicators: Career and Customized Education	38.6	1.45	21.3	55.2	17.3	44.8
Category 1	Student Progression Indicators	39.4	1.47	20.8	52.8	18.6	47.2
Category 5	External Indicators: Community Development	35.5	1.52	17.0	47.9	18.5	52.1
Category 2	Internal Indicators	36.2	1.60	14.5	40.0	21.7	60.0
Category 3	General Education Indicators	37.5	1.75	9.2	24.5	28.3	75.5

The mean scores and frequency of use by student services administrators range from a low of 24.5% and a mean of 1.75 for Category 3: General Education Indicators to a high of 63.9% and a mean of 1.36 for Category 6: Customer Satisfaction. Student services administrators used three categories of indicators above a 50% level. These include: Category 6: Customer Satisfaction; Category 4: External Indicators, Career and Customized Education; and Category 1: Student Progression Indicators.

Table 12 displays the categories of effectiveness indicators in rank order of mean scores and frequency of use by business affairs administrators.

Table 12
Use of Indicators:
Business Affairs Administrators,
Rank Order

Category	Indicator	n	Mean	Yes		No	
		22		n	%	n	%
Category 4	External Indicators: Career and Customized Education	20.3	1.59	8.3	40.9	12.0	59.1
Category 6	Customer Satisfaction	19.6	1.72	5.4	27.6	14.2	72.4
Category 5	External Indicators: Community Development	20.0	1.72	5.5	27.5	14.5	72.5
Category 1	Student Progression Indicators	20.8	1.77	4.8	23.1	16.0	76.9
Category 2	Internal Indicators	19.5	1.79	4.0	20.5	15.5	79.5
Category 3	General Education Indicators	21.7	1.90	2.2	10.1	19.5	89.9

The mean scores and frequency of use for business affairs administrators range from a low of 10.1% and a mean of 1.90 for Category 3: General Education Indicators, to a high of 40.9% and a mean score of 1.59 for Category 4: External Indicators, Career and Customized Education. The use of indicators by business affairs administrators were all below 50% use. This was the only administrative category which had no indicators used above the 50% level.

Table 13 displays in categorical order the mean scores of using effectiveness indicators as a way to initiate change for all respondents and for each administrative position.

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Table 13
Use of Indicator:
Comparison of Mean Scores
by Administrative Position,
Categorical Order

Category	Indicator	All	Presidents	Instruction	Student Services	Business Affairs
		n=135	n=25	n=45	n=43	n=22
Category 1	Student Progression Indicators	1.51	1.42	1.46	1.47	1.77
Category 2	Internal Indicators	1.58	1.50	1.48	1.60	1.79
Category 3	General Education Indicators	1.75	1.64	1.73	1.75	1.90
Category 4	External Indicators: Career and Customized Education	**1.40**	1.31	**1.30**	1.45	**1.59**
Category 5	External Indicators: Community Development	1.49	1.37	1.42	1.52	1.72
Category 6	Customer Satisfaction	1.41	**1.28**	1.38	**1.36**	1.72

Note: Shaded areas indicate mean values for categories with the highest administrative use.

The lowest mean values indicate highest administrative use of indicators. Category 4: External Indicators, Career and Customized Education, ranked the highest by mean score. This category includes placement rate in the workforce, employer assessment of students and client/customer assessment of programs and services. Category 6: Customer Satisfaction, ranked second most used. Customer Satisfaction includes indicators such as, student satisfaction with preparation for their current employment one year after completing their program, employer satisfaction with former students as graduates, university and four year college satisfaction with academic preparation of transfer students, student satisfaction with teaching effectiveness, and student satisfaction with student services.

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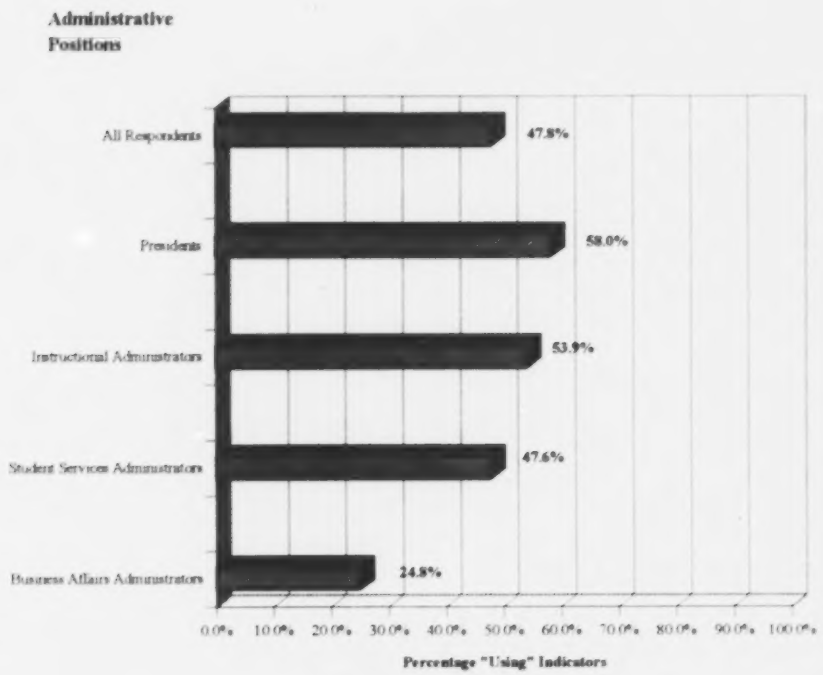
Figure 4 displays the use of effectiveness indicators by each administrative position and shows a range of use from a low of 24.8% by business affairs administrators to a high of 58.0% by presidents.

Figure 4
Percentage of Administrators Using
Effectiveness Indicators to Initiate Change



The use of indicators as a way of initiating change was further analyzed by survey question 16. *Have you in your area of responsibility used assessment information as input to the decision making process in any of the following areas?* The question included eleven areas and one open-ended response category. The eleven categories included planning, budgeting, program review, accreditation, quality improvement

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measures, improving services, improving learning, improving occupational programs, improving general education outcomes, legislative accountability, community accountability, and other.

Table 14 depicts the use of indicators or assessment information as input to the specified decision making process by all respondents and each administrative group.

Table 14
Use of Indicators in
Decision Making Process
by Administrative Position,
Categorical Order

Decision Making Process	All	Presidents	Instruction	Student Services	Business Affairs
Planning	1	1	1	2	1
Budgeting	3	2	5	5	1
Program review	5	4	2	3	6
Accreditation	4	1	3	4	3
Quality improvement measures	6	6	7	6	3
Improving services	2	3	4	1	2
Improving learning	7	6	3	8	9
Improving occupational programs	8	5	4	10	8
Improving general education outcomes	10	8	6	11	7
Legislative accountability	9	7	8	7	4
Community accountability	11	8	9	9	5
Other	12	9	10	12	10

Note: Shaded areas indicate categories that ranked in the top five by each administrative position.

The use of indicators in certain decision making categories was almost the same for each administrative group, as indicated by the shading in Table 14. Indicators and/or assessment information were used the most in planning, budgeting, program review, accreditation and improving services. Others rating in the top five by one or more

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administrative groups included quality improvement measures, improving occupational programs, legislative accountability and community accountability.

Research Question 3

Do community college administrators believe that the use of effectiveness indicators led to positive changes or improvements in their institutions?

Summary of Significant Findings for Question 3

First, all respondents believed that Category 5: External Indicators, Community Development, was the indicator which led to the most positive change. Second, presidents believed Category 4: External Indicators, Career and Customized Education, was the indicator which led to the most positive change. Third, instructional, student services and business affairs administrators believed Category 5: External Indicators, Community Development, was the indicator which led to the most positive change. Fourth, all respondents rated two categories between positive and very positive. The two categories were Category 5: External Indicators, Community Development and Category 4: External Indicators, Career and Customized Education, as the indicators which led to the most positive change.

Presentation and Analysis of Data

The purpose of this section is to examine the perception of primary administrators who have used effectiveness indicators and whether that use led to positive change at their

community colleges. The survey qualified this question about respondent's perception to those administrators who used effectiveness indicators to initiate change at their institution as indicated in the survey.

The information was captured using a 5 point Likert type scale ranging from very negative change to very positive change with an added "Don't know," which is considered an invalid response for the purpose of this study.

The following tables summarize the frequency of responses and mean scores for all respondents and by each administrative position. In these tables the higher the mean score on the Likert type scale the more positive the perception about the use of indicators leading to positive change at their community colleges.

Table 15 displays the categories of indicators, in rank order of positive mean scores, for all respondents and their perception about the use of effectiveness indicators leading to positive change at their community colleges.

Table 15
Perception of Use and Change:
All Respondents,
Rank Order

Cat.	N	Mean	Very Negative		Negative		No Change		Positive		Very Positive	
	135		n	%	n	%	n	%	n	%	n	%
5	56.0	1.20	0	0	0	0	5.5	9.8	33.5	59.8	17.0	30.4
4	73.7	1.15	0	0	.7	1.0	5.0	6.8	50.3	68.2	17.7	24.0
3	29.4	.97	0	0	0	0	4.7	16.0	20.9	71.1	3.8	12.9
6	68.4	.95	0	0	.2	.3	10.6	15.5	49.8	72.8	7.8	11.4
1	56.4	.79	0	0	0	0	16.4	29.1	35.2	62.4	4.8	8.5
2	45.0	.79	0	0	1.3	2.9	13.0	28.9	24.3	54.0	6.4	14.2

Category 5=External Indicators: Community Development
Category 4=External Indicators: Career and Customized Education
Category 3=General Education Indicators
Category 6=Customer Satisfaction
Category 1=Student Progression Indicators
Category 2=Internal Indicators

The perception of use and change ranged from a low mean score of .79 on a scale of -2 to +2, for Category 2: Internal Indicators, and Category 1: Student Progression Indicators, to a high of 1.20 for Category 5: External Indicators, Community Development. All categories of indicators were perceived to have led to positive change at their institutions.

Table 16 displays the categories of indicators, in rank order of positive mean scores for presidents and their perception about the use of effectiveness indicators leading to positive changes at their community colleges.

Table 16
Perception of Use and Change:
Presidents,
Rank Order

Cat.	N	Mean	Very Negative		Negative		No Change		Positive		Very Positive	
	25		n	%	n	%	n	%	n	%	n	%
4	16.0	1.29	0	0	0	0	1.7	10.6	8.0	50.0	6.3	39.4
5	13.5	1.26	0	0	0	0	1.0	7.4	8.0	59.3	4.5	33.3
3	8.2	1.04	0	0	0	0	.6	7.3	6.7	81.7	.9	11.0
2	7.2	.97	0	0	0	0	1.8	25.0	3.8	52.8	1.6	22.2
6	16.6	.92	0	0	.2	1.2	2.4	14.5	12.6	75.9	1.4	8.4
1	12.4	.87	0	0	0	0	3.2	25.8	7.6	61.3	1.6	12.9

Category 4=External Indicators: Career and Customized Education
Category 5=External Indicators: Community Development
Category 3=General Education Indicators
Category 2=Internal Indicators
Category 6=Customer Satisfaction
Category 1=Student Progression Indicators

The perception of presidents about the use of effectiveness indicators leading to positive change can be seen in this rank order. The rank order of mean scores ranged from a low of .87 for Category 1: Student Progression Indicators, to a high of 1.29 for Category 4: External Indicators, Career and Customized Education. All indicators had positive mean scores with three categories: Category 4: External Indicators, Community Development; Category 5: External Indicators, Career and Customized Education; and Category 3: General Education Indicators, being rated between positive and very positive.

Table 17 displays the categories of indicators, in rank order of positive mean scores, for instructional administrators and their perception about the use of effectiveness indicators leading to positive change at their community colleges.

Table 17
Perception of Use and Change:
Instructional Administrators,
Rank Order

Cat.	N	Mean	Very Negative		Negative		No Change		Positive		Very Positive	
	45		n	%	n	%	n	%	n	%	n	%
5	20.0	1.30	0	0	0	0	1.5	7.5	11.0	55.0	7.5	37.5
4	27.0	1.17	0	0	.3	1.1	.7	2.6	20.0	74.1	6.0	22.2
3	10.2	1.08	0	0	0	0	1.5	14.7	6.4	62.7	2.3	22.6
6	23.0	1.01	0	0	0	0	3.4	14.8	16.0	69.6	3.6	15.6
2	18.7	.90	0	0	.5	2.7	4.5	24.0	10.0	53.5	3.7	19.8
1	19.2	.88	0	0	0	0	4.4	22.9	12.6	65.6	2.2	11.5

Category 5=External Indicators: Community Development
Category 4=External Indicators: Career and Customized Education
Category 3=General Education Indicators
Category 6=Customer Satisfaction
Category 2=Internal Indicators
Category 1=Student Progression Indicators

The perception by instructional administrators about the use of effectiveness indicators leading to positive change at their institutions ranged from a low mean of .88 for Category 1: Student Progression Indicators, to a high mean of 1.30 for Category 5: External Indicators, Community Development. Four of the six indicators mean scores were rated above 1.0, or positive to very positive. The positively rated indicators included: Category 5: External Indicators, Community Development; Category 4: External Indicators, Career and Customized Education; Category 3: General Education; and Category 6: Customer Satisfaction.

Table 18 displays the categories of indicators, in rank order of positive mean scores, for student services administrators and their perception about the use of effectiveness indicators leading to positive change at their community colleges.

Table 18
Perception of Use and Change:
Student Services Administrators,
Rank Order

Cat.	N	Mean	Very Negative		Negative		No Change		Positive		Very Positive	
	43		n	%	n	%	n	%	n	%	n	%
5	17.0	1.06	0	0	0	0	3.0	17.6	10.0	58.8	4.0	23.5
4	22.3	1.03	0	0	.3	1.3	2.0	9.0	16.7	74.9	3.3	14.8
6	23.6	.91	0	0	0	0	4.0	16.9	17.6	74.6	2.0	8.5
3	8.9	.79	0	0	0	0	2.3	25.8	6.2	69.7	.4	4.5
2	15.2	.70	0	0	.5	3.3	4.7	30.9	8.8	57.9	1.2	7.9
1	20.8	.69	0	0	0	0	7.2	34.6	12.8	61.5	.8	3.9

Category 5=External Indicators: Community Development
Category 4=External Indicators: Career and Customized Education
Category 6=Customer Satisfaction
Category 3=General Education Indicators
Category 2=Internal Indicators
Category 1=Student Progression Indicators

The perception of student services administrators about the use of effectiveness indicators leading toward positive change at their institutions ranges from a low mean score of .69 for Category 1: Student Progression Indicators, to a high mean of 1.06 for Category 5: External Indicators, Community Development. All effectiveness indicators were rated on the positive side from no change to positive change, and two indicators, Category 5: External Indicators, Community Development and Category 4: External Indicators, Career and Customized Education, rated between positive and very positive.

Table 19 displays the categories of indicators, in rank order of positive mean scores, for business affairs administrators and their perception about the use of effectiveness indicators leading to positive change at their community colleges.

Table 19
Perception of Use and Change:
Business Affairs Administrators,
Rank Order

Cat.	N	Mean	Very Negative		Negative		No Change		Positive		Very Positive	
	22		n	%	n	%	n	%	n	%	n	%
5	5.5	1.18	0	0	0	0	0	0	4.5	81.8	1.0	18.2
4	8.3	1.16	0	0	0	0	.7	8.4	5.6	67.5	2.0	24.1
6	5.2	.94	0	0	0	0	.8	15.4	3.6	69.2	.8	15.4
2	3.7	.87	0	0	0	0	.75	20.0	2.75	73.3	.25	6.7
3	2.0	.85	0	0	0	0	.4	20.0	1.5	75.0	.1	5.0
1	6.8	.65	0	0	0	0	2.6	38.2	4.0	58.8	.20	3.0

Category 5=External Indicators: Community Development
Category 4=External Indicators: Career and Customized Education
Category 6=Customer Satisfaction
Category 2=Internal Indicators
Category 3=General Education Indicators
Category 1=Student Progression Indicators

The perception of business affairs administrators about the use of effectiveness indicators leading toward positive change at their institutions ranged from a low mean of .65 for Category 1: Student Progression Indicators, to a high mean of 1.18 for Category 5: External Indicators, Community Development. All categories of effectiveness indicators were on the positive side of no change to positive change, with three categories of indicators above the rating of positive change. Positively rated indicators included:

Category 5: External Indicators, Community Development; Category 4: External Indicators, Career and Customized Education; and Category 6: Customer Satisfaction.

Table 20
Perception That Use Led to Change:
Comparison of Mean Scores by Administrative Position,
Categorical Order

Category	Indicator	All		Presidents		Instruction		Student Services		Business Affairs	
		n=135		n=25		n=45		n=43		n=22	
		n	mean	n	mean	n	mean	n	mean	n	mean
Category 1	Student Progression Indicators	56.4	.79	12.4	.87	19.2	.88	20.8	.69	6.8	.65
Category 2	Internal Indicators	45.0	.79	7.2	.97	18.7	.90	15.2	.70	3.7	.87
Category 3	General Education Indicators	29.4	.97	8.2	1.04	10.2	1.08	8.9	.79	2.0	.85
Category 4	External Indicators: Career and Customized Education	73.7	1.15	16.0	**1.29**	27.0	1.17	22.3	1.03	8.3	1.16
Category 5	External Indicators: Community Development	56.0	**1.20**	13.5	1.26	20.0	**1.30**	17.0	**1.06**	5.5	**1.18**
Category 6	Customer Satisfaction	68.4	.95	16.6	.92	23.0	1.01	23.6	.91	5.2	.94

Note: Shaded areas indicate categories with the most positive mean scores by administrative position or the perception that the use led to positive change.

Research Question 4

Is there a difference by community college administrative position in the belief that they should use effectiveness indicators for initiating institutional change?

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Summary of Significant Findings for Question 4

First, all respondents believed that they should use effectiveness indicators in a very similar way. Second, all respondents believed Category 4: External Indicators, Career and Customized Education, and Category 6: Customer Satisfaction, would be the most valuable for initiating change at their community colleges. Third, presidents, instructional administrators and student services administrators believed Category 6: Customer Satisfaction, would be most valuable as a way to initiate change. Instructional administrators also believed Category 4: External Indicators, Career and Customized Education, would be most valuable as a way to initiate change. Fourth, business affairs administrators believed Category 4: External Indicators, Career and Customized Education would be most valuable to initiate change. Fifth, dispersion maps indicate a high level of agreement by each administrative subgroups in the belief that they should use effectiveness indicators to initiate change. Sixth, there is statistically no significant difference between administrative subgroups in the belief that they should use effectiveness indicators to initiate change.

Presentation and Analysis of Data

The following analysis examines the belief by all respondents and each administrative subgroup that they should use effectiveness indicators to initiate change at their institutions. The comparison is provided to examine the similarity and differences in the belief that they should use effectiveness indicators. Primary administrators' belief that they should use effectiveness indicators to initiate institutional change was examined in research question 3 and the resulting mean scores were presented here in summary form.

Table 21
Perception of Indicator:
Comparison of Mean Scores
by Administrative Position,
Categorical Order

Category	Indicator	All	Presidents	Instruction	Student Services	Business Affairs
		n=135	n=25	n=45	n=43	n=22
Category 1	Student Progression Indicators	1.09	**1.02**	1.10	1.11	1.11
Category 2	Internal Indicators	1.12	1.11	1.10	1.14	1.14
Category 3	General Education Indicators	1.14	1.09	1.17	1.15	1.14
Category 4	External Indicators: Career and Customized Education	**1.03**	1.04	**1.02**	1.04	**1.01**
Category 5	External Indicators: Community Development	1.14	1.16	1.13	1.15	1.11
Category 6	Customer Satisfaction	**1.03**	**1.02**	**1.02**	**1.02**	1.10

Note: Shaded areas indicate categories with the most positive mean score or scores.

Table 21 depicts a comparison of the mean scores for all respondents and by each administrative position based on their response to the survey's "*Section A: Perception of the indicator: Do you believe this indicator is important or not important as a way to initiate change at your institution?*" In the responses, the closer the mean value is to 1.0 for each category the more affirmative were the responses. A mean score of 1.0 for a category would represent a completely affirmative response to the question.

The responses by categorical order indicate general agreement in the belief that two categories should be used most to initiate change. All respondents, presidents, instructional administrators, and student services administrators all believed that Category

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6: Customer Satisfaction would be most valuable. All respondents and instructional administrators believed equally that Category 4: External Indicators, Career and Customized Education, was also most valuable to initiate change. Business affairs administrators also rated Category 4: External Indicators, Career and Customized Education as their most valuable category.

In general, the lowest rated categories varied between Category 3: General Education Indicators, Category 5: External Indicators, Community Development, and Category 2: Internal Indicators. The extent to which administrators' believe they should use effectiveness indicators for initiating institutional changes was determined by the affirmative responses of primary community college administrators' belief that they should use effectiveness indicators to initiate change within their respective institutions. The above analysis provided overall affirmative responses by all administrators in the belief that they should use effectiveness indicators to initiate change, ranging from 85.6% for General Education Indicators to 97.2% for External Indicators: Career and Customized Education.

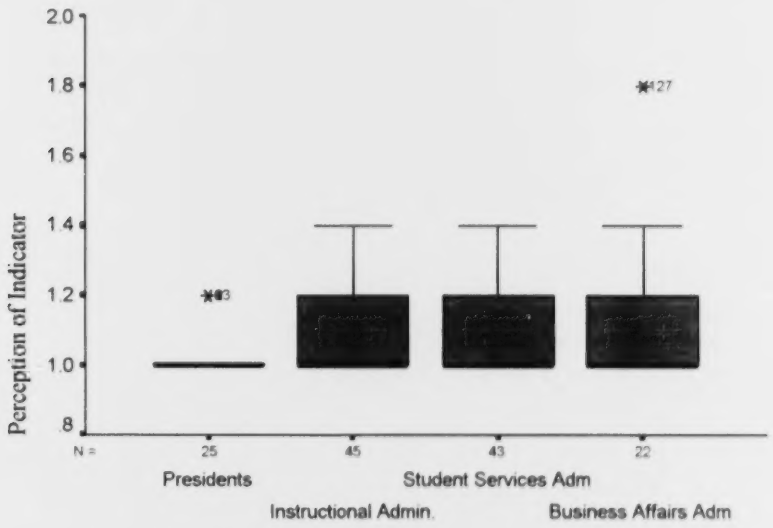
Dispersion of Each Administrative Group

The data were further analyzed for dispersion or spread of variation within each subgroup on similarity of agreement about their belief that they should use indicators as a way to initiate change in their community colleges. The dispersion is shown by boxplots or stem and leaf plots:

> Boxplots are used to compare distributions. Each distribution is represented by a rectangular box whose length represents the variable's inter-quartile range, on a scale corresponding to the observed values of the variable. A line, or 'whisker,' extends from each end of the box to the variable's largest and smallest values, aside from those classed as outliers or extreme values. In SPSS,

an outlier is a value that is more than one and one-half box lengths from the end of the box, while an extreme value is a value that is more than three box lengths from the end of the box. (SPSS, 1997, p. 512).

Figure 5
Category One A: Student Progression Indicators,
Perception of Indicator

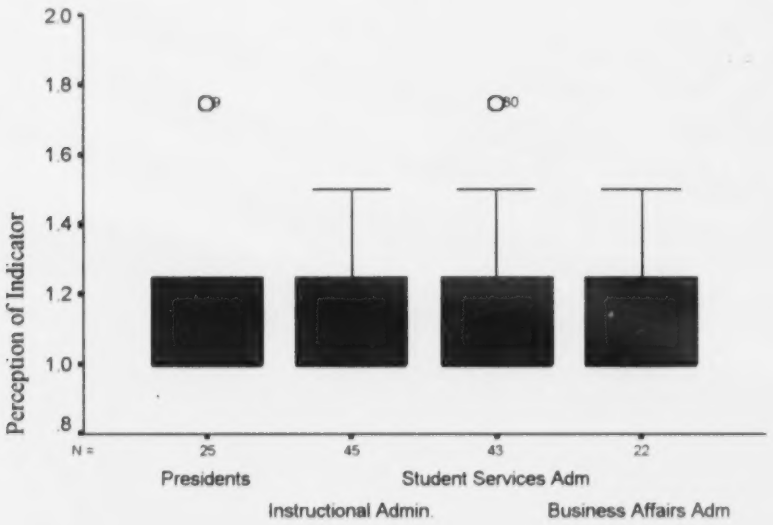


Administrative Position

Note: "Yes" equals 1 and "No" equals 2

Category 1: Student Progression Indicators displays almost perfect agreement among community college presidents in their belief that they should use indicators to initiate change. The dispersion or spread of variation for instructional, student services and business affairs administrators displays a similar pattern and affirmative opinion about the use of indicators to initiate change.

Figure 6
Category Two A: Internal Indicators,
Perception of Indicator

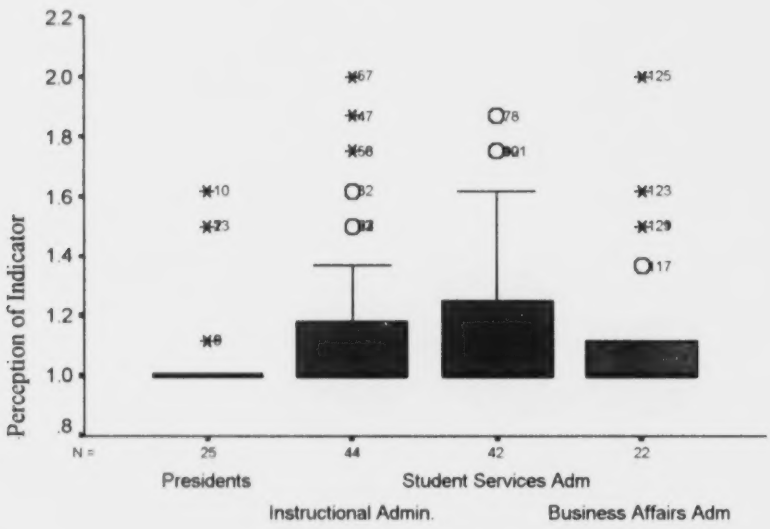


Administrative Position

Note: "Yes" equals 1 and "No" equals 2

Category 2: Internal Indicators, displays a dispersion pattern similar for all four administrative sub groups. The opinion is also affirmative that they should use indicators to initiate change.

Figure 7
Category Three A: General Education Indicators,
Perception of Indicator

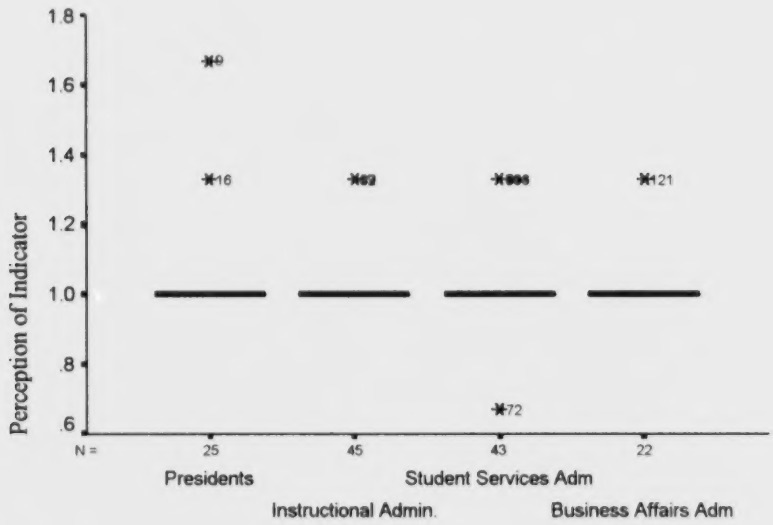


Administrative Position

Note: "Yes" equals 1 and "No" equals 2

Category 3: General Education Indicators displays varying opinions and a number of outliers. In boxplots, outliers are values "...that are more than one and one-half box lengths from the end of the box." (SPSS, 1997, p. 512). Presidents in general have similar opinions although several outliers exist. Instructional and student services administrators vary but the spread of variation is less for instructional administrators, or they have similar opinions. Business affairs administrators displayed relatively close agreement about the value of using general education indicators for initiating change and they were similar to presidents in their opinions, although more outliers existed for business affairs administrators than for presidents.

Figure 8
Category Four A: External Indicators, Career and Customized Education, Perception of Indicator



Note: "Yes" equals 1 and "No" equals 2

Category 4: External Indicators: Career and Customized Education displayed almost perfect agreement in all categories in the belief that they should use indicators to initiate change in their community colleges. The perception by all administrative subgroups was unanimously affirmative, with few outliers.

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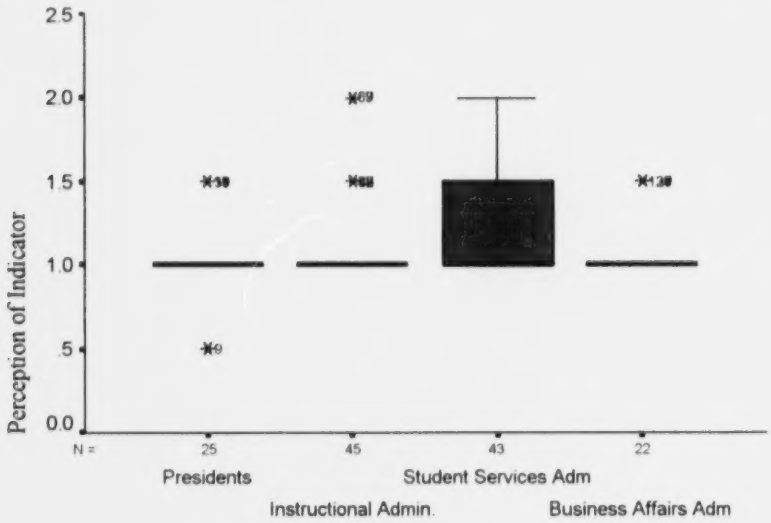
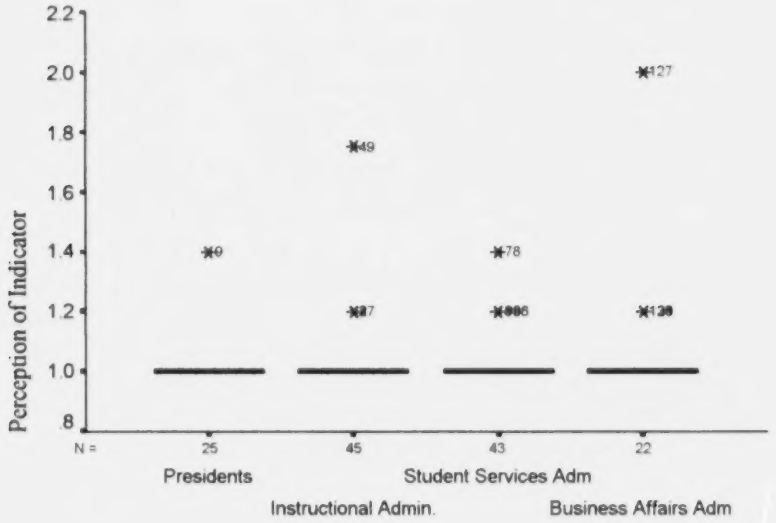
Figure 9
Category Five A: External Indicators, Community Development, Perception of Indicator



Note: "Yes" equals 1 and "No" equals 2

Category 5: External Indicators: Community Development displays a similar pattern of dispersion to Category 4: External Indicators, Career and Customized Education, with the exception of student services administrators who seem to display some spread in variation.

Figure 10
Category Six A: Customer Satisfaction,
Perception of Indicator



Administrative Position

Note: "Yes" equals 1 and "No" equals 2

Category 6: Customer Satisfaction displays for all administrative groups, with the exception of outliers, almost perfect affirmative belief that they should use this effectiveness indicator category for initiating change at their community colleges.

Null Hypothesis

Question four was further analyzed by testing the null hypothesis: There is no significant difference between community college presidents, instructional administrators, student services administrators and business affairs administrators in the belief that they should use effectiveness indicators as a way to initiate change in their institutions. The

question was analyzed using the one-way analysis of variance, ANOVA, with a fixed design to determine if any significant difference existed between the mean scores of each administrative position. The extent to which they differ was analyzed using each dependent variable "should use" by each effectiveness category and the independent variable of each administrative position.

The ANOVA test for statistical significance found no statistically significant difference between the mean scores of community college presidents, instructional administrators, student services administrators and business affairs administrators in their belief that they should use effectiveness indicators to initiate change in all six categories of effectiveness indicators. The post hoc Boneferroni multiple comparisons as a result showed no group means as being statistically different.

Therefore, the null hypothesis cannot be rejected or there is no statistically significant difference in the belief that they should use effectiveness indicators between community college presidents, instructional administrators, student services administrators and business affairs administrators.

Research Question 5

Is there a difference by community college administrative position in the use of effectiveness indicators for initiating institutional change.

Summary of Significant Findings for Question 5

First, two categories of effectiveness indicators dominate the use by administrative groups, Category 4: External Indicators, Career and Customized Education and Category 6: Customer Satisfaction. Second, instructional and business affairs administrators indicated they most used Category 4: External Indicators, Career and Customized Education. Third, presidents and student services administrators indicated they most used Category 6: Customer Satisfaction. Fourth, the categories where effectiveness indicators were most used for decision making included, in rank order by most use, planning, improving services, budgeting, accreditation, and program review. Fifth, administrative subgroups used effectiveness indicators most for decision making processes involving planning, although improving services and budgeting were also ranked first in at least one subgroup. Sixth, overall effectiveness indicators were used for decisions regarding legislative and community accountability as 9th and 11th respectively which was very low use in the list of decision making processes. Seventh, dispersions or spread of variations in the use of indicators was much wider than administrators belief that they should use indicators. This would indicate varying use by administrators. Eighth, business affairs administrators displayed about the same dispersion but lower use than other administrative subgroups. Ninth, ANOVA test found significant statistical differences between administrative subgroups. Tenth, post hoc multiple comparisons test showed a significant

difference between business affairs administrators and one or more other administrative subgroups in each category of indicators.

Presentation and Analysis of Data

Table 22 displays in categorical order, the mean scores for use of effectiveness indicators by each administrative position.

Table 22
Use of Indicators:
Comparison of Mean Scores
by Administrative Position,
Categorical Order

Category	Indicator	All	Presidents	Instruction	Student Services	Business Affairs
		Mean	Mean	Mean	Mean	Mean
Category 1	Student Progression Indicators	1.51	1.42	1.46	1.47	1.77
Category 2	Internal Indicators	1.58	1.50	1.48	1.60	1.79
Category 3	General Education Indicators	1.75	1.64	1.73	1.75	1.90
Category 4	External Indicators: Career and Customized Education	**1.40**	1.31	**1.30**	1.45	**1.59**
Category 5	External Indicators: Community Development	1.49	1.37	1.42	1.52	1.72
Category 6	Customer Satisfaction	1.41	**1.28**	1.38	**1.36**	1.72

Note: Shaded areas indicate mean values for categories with the highest administrative use.

The lower the value of the mean score the more affirmative the response for having used the category of indicator.

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The table depicts two primary categories which dominate the use of indicators for initiating change. The first category is Category 5: External Indicators, Career and Customized Education, most used by all respondents and individually by instructional and business affairs administrators. This category was also the second category most used by presidents and student services administrators. Indicators included in this category are placement rates in the workforce, employer assessment of students, and client/customer assessment of programs and services. The second category most used was Category 6: Customer Satisfaction. It was most used by presidents and student services administrators. This same category was the second most used category by the other administrative positions and was second most used by all respondents.

Although there is general agreement which categories of indicators are most used by all administrative positions the extent in the use of effectiveness indicators appears to be different for each administrative position. The average or mean values display a pattern which indicates presidents use indicators most, followed by instructional administrators, student services administrators and business affairs administrators. The mean value of the business affairs administrators was seventeen points lower than the next closest score and twenty-five points below presidents. This indicates that the extent of use varies considerably between some positions.

Use and Decision Making

The difference in the use of effectiveness indicators can be further analyzed by examining the responses to question 16 which asked, *"Have you in your area of responsibility used assessment information as input to the decision making process in any*

of the following areas?" The areas included planning, budgeting, program review, accreditation, quality improvement measures, improving services, improving learning, improving occupational programs, improving general education outcomes, legislative accountability, community accountability and other as open ended.

The responses to the use of indicators and/or assessment information for decision making processes is displayed in the following tables. Overall, planning, improving services, budgeting, accreditation and program review were rated as the most used. The ratings as portrayed in Table 23 range from a use of 77.3% to a high of 94.7%. The decision making process where they appeared to be least used was for community accountability.

Table 23
Use of Indicators in
Decision Making Processes:
All Respondents,
Categorical Order

Decision making process	Rank Order	Yes		No	
		#	%	#	%
Planning	1	126	94.7	7	5.3
Budgeting	3	112	84.2	21	15.8
Program review	5	102	77.3	30	22.7
Accreditation	4	107	81.1	25	18.9
Quality improvement measures	6	81	61.4	51	38.6
Improving services	2	113	85.6	19	14.4
Improving learning	7	72	54.5	60	45.5
Improving occupational programs	8	69	52.3	63	47.7
Improving general education outcomes	10	59	44.7	73	55.3
Legislative accountability	9	66	50.0	66	50.0
Community accountability	11	58	43.9	74	56.1
Other	12	7	5.3	125	94.7

Note: Shaded areas indicate categories ranked in the top five by all respondents.

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Presidents, shown in Table 24, used indicators most for planning, accreditation, budgeting, improving services, program review and improving occupational programs. Effectiveness indicators were least used for decision making processes involving community accountability.

Table 24
Use of Indicators in
Decision Making Processes:
Presidents,
Categorical Order

Decision making process	Rank Order	Yes #	Yes %	No #	No %
Planning	1	23	95.8	1	4.2
Budgeting	2	22	91.7	2	8.3
Program review	4	20	83.3	4	16.7
Accreditation	1	23	95.8	1	4.2
Quality improvement measures	6	16	66.7	8	33.3
Improving services	3	21	87.5	3	12.5
Improving learning	6	16	66.7	8	33.3
Improving occupational programs	5	18	75.0	6	25.0
Improving general education outcomes	8	14	58.3	10	41.7
Legislative accountability	7	15	62.5	9	37.5
Community accountability	8	14	58.3	10	41.7
Other	9	0	00	24	100

* Those with same percentages are rank ordered with the same number.

Note: Shaded areas indicate categories ranked in the top five by presidents.

Instructional administrators, shown in Table 25, used indicators most for decisions involving planning, program review, accreditation, improving services, improving occupational programs and budgeting. Effectiveness indicators again were least used for decision making processes involving community accountability.

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Table 25
Use of Indicators in
Decision Making Processes:
Instructional Administrators,
Categorical Order

Decision making process	Rank Order	Yes		No	
		#	%	#	%
Planning	1	41	91.1	4	8.9
Budgeting	5	36	80.0	9	20.0
Program review	2	40	88.9	5	11.1
Accreditation	3	38	84.4	7	15.6
Quality improvement measures	7	27	60.0	18	40.0
Improving services	4	37	82.2	8	17.8
Improving learning	3	38	84.4	7	15.6
Improving occupational programs	4	37	82.2	8	17.8
Improving general education outcomes	6	30	66.7	15	33.3
Legislative accountability	8	22	48.9	23	51.1
Community accountability	9	21	46.7	24	53.3
Other	10	4	8.9	41	91.1

* Those with same percentages are rank ordered with the same number.

Note: Shaded areas indicate categories ranked in the top five by instructional administrators.

Student services administrators, shown in Table 26, used indicators most for decisions involving improved services, planning, program review, accreditation and budgeting. Unlike presidents and instructional administrators, they used indicators for decisions involving community accountability but used indicators least for improving general education outcomes.

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Table 26
Use of Indicators in
Decision Making Processes:
Student Services Administrators,
Categorical Order

Decision making process	Rank Order	Yes		No	
		#	%	#	%
Planning	2	41	95.3	2	4.7
Budgeting	5	33	76.7	10	23.3
Program review	3	35	81.4	8	18.6
Accreditation	4	34	79.1	9	20.9
Quality improvement measures	6	26	60.5	17	39.5
Improving services	1	42	97.7	1	2.3
Improving learning	8	17	39.5	26	60.5
Improving occupational programs	10	12	27.9	31	72.1
Improving general education outcomes	11	11	25.6	32	74.4
Legislative accountability	7	18	41.9	25	58.1
Community accountability	9	15	34.9	28	65.1
Other	12	2	4.7	41	95.3

Note: Shaded areas indicate categories ranked in the top five by student services administrators.

Business affairs administrators, shown in Table 27, varied somewhat from other administrators in their use of indicators for decision making. They also used indicators for decisions involving planning, budgeting, improving services, accreditation and quality improvement measures, but unlike any of the other administrative positions, they used effectiveness indicators for decisions related to legislative accountability and community accountability.

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Table 27
Use of Indicators in
Decision Making Processes:
Business Affairs Administrators,
Categorical Order

Decision making process	Rank Order	Yes		No	
		#	%	#	%
Planning	1	21	100	0	0
Budgeting	1	21	100	0	0
Program review	6	7	35.0	13	65.0
Accreditation	3	12	60.0	8	40.0
Quality improvement measures	3	12	60.0	8	40.0
Improving services	2	13	65.0	7	35.0
Improving learning	9	1	5.0	19	95.0
Improving occupational programs	8	2	10.0	18	90.0
Improving general education outcomes	7	4	20.0	16	80.0
Legislative accountability	4	11	55.0	9	45.0
Community accountability	5	8	40.0	12	60.0
Other	10	1	5.0	19	95.0

* Those with same percentages are rank ordered with the same number.

Note: Shaded areas indicate categories ranked in the top five by business affairs administrators.

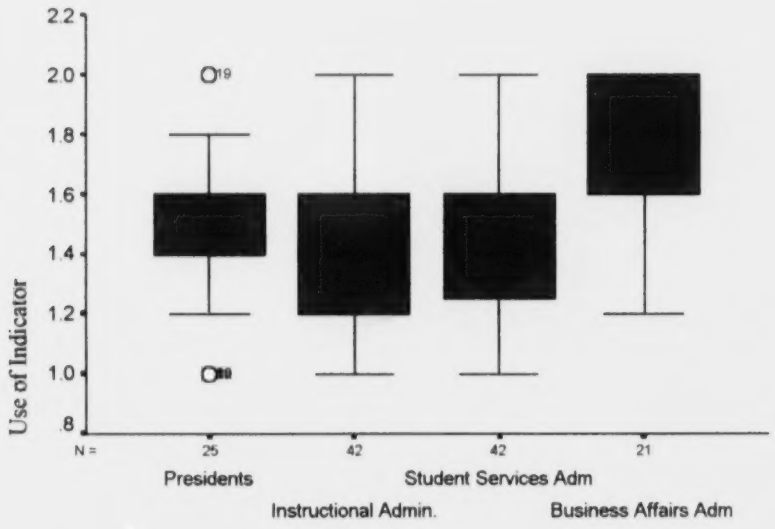
Dispersion of Each Administrative Group

The data was visually analyzed for its dispersion or spread of variation within each administrative group through the use of boxplots or stem and leaf plots. Boxplots visually display each category and its spread or variation for each subgroup or administrative position.

Boxplots or stem and leaf plots display data in the following manner. "The solid black line is the median; the gray rectangle extends from the 25th to the 75th percentile (that is the middle 50% of the distribution; and the whiskers extend to the largest and smallest observed values within 1½ times the height of each rectangle. If there are any

points outside the whiskers, they are labeled with case ID's ... and generally called outliers" (SPSS, 1996, p. 20).

Figure 11
Category One B: Student Progression Indicators,
Use of Indicator

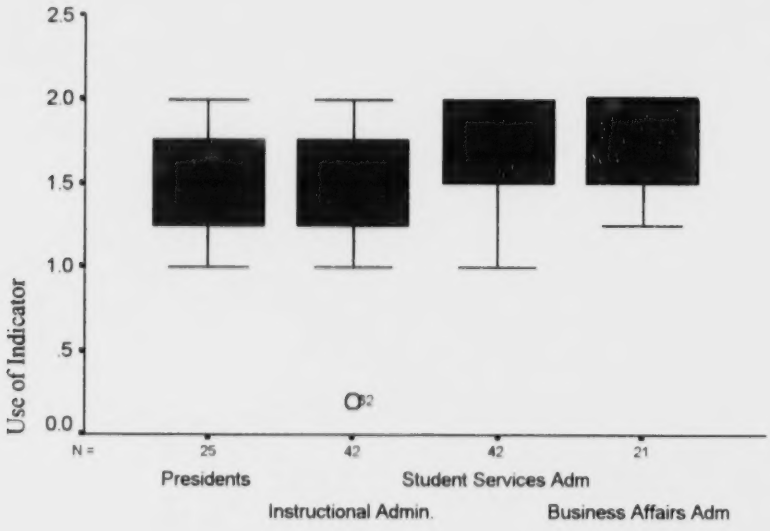


Administrative Position

Note: "Yes" equals 1 and "No" equals 2

Category 1: Student Progression Indicators, shown in Figure 11, indicates much greater agreement between presidents than other groups. The dispersion and range is similar for instruction and student services administrators and quite different for business affairs administrators. The dispersion for business affairs administrators indicates a high non use of indicators and a fairly wide dispersion.

Figure 12
Category Two B: Internal Indicators,
Use of Indicator

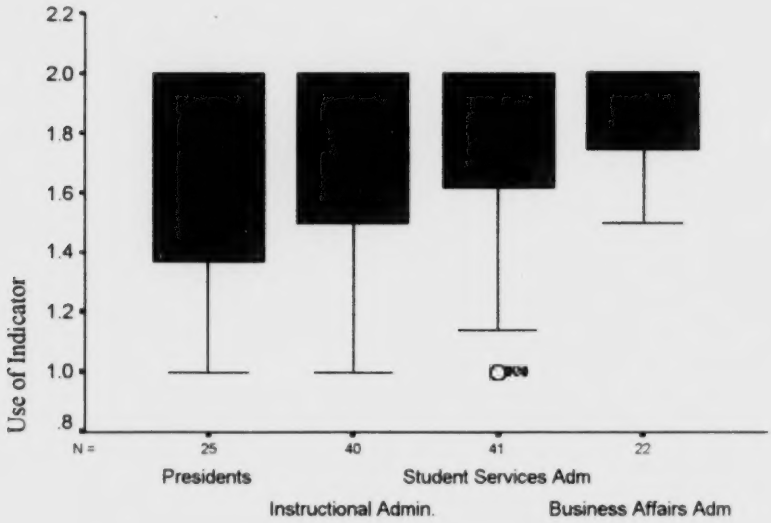


Administrative Position

Note: "Yes" equals 1 and "No" equals 2

Category 2: Internal Indicators, shown in Figure 12, displays similar dispersions for presidents and instructional administrators and less use of indicators by student service administrators and business affairs administrators. The dispersion for business affairs administrators indicates a fairly close agreement and low use of the indicator.

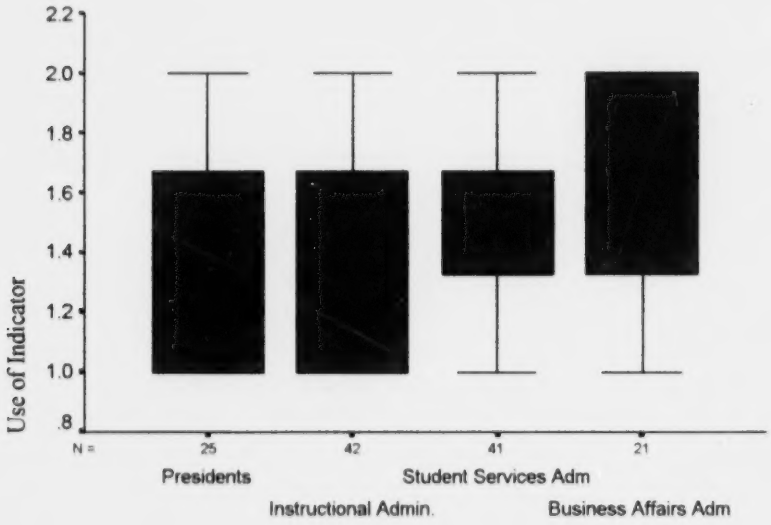
Figure 13
Category Three B: General Education Indicators,
Use of Indicator



Note: "Yes" equals 1 and "No" equals 2

Category 3: General Education Indicators, shown in Figure 13, indicates low use by all subgroups and varying dispersion or agreement within each subgroup. Presidents and instructional administrators have similar use rates and wide dispersion. Student services administrators have lower use but similar dispersion. Business affairs administrators have narrow dispersion and low use.

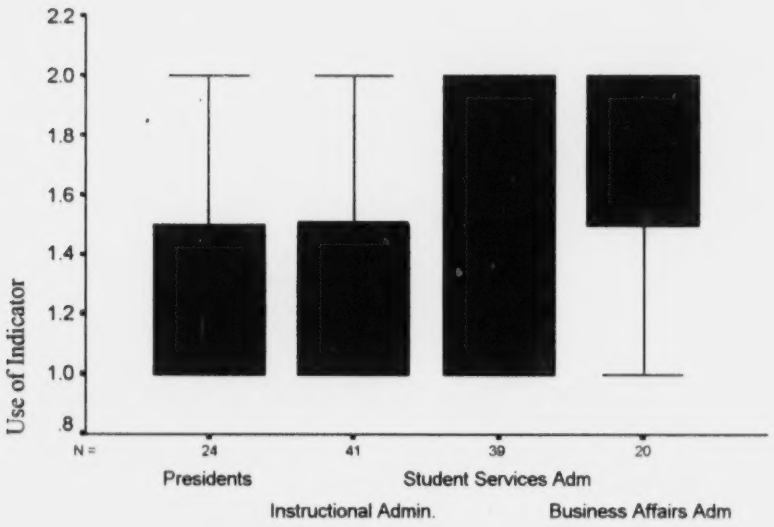
Figure 14
Category Four B: External Indicators, Career and Customized Education, Use of Indicator



Note: "Yes" equals 1 and "No" equals 2

Category 4: External Indicators: Career and Customized Education, shown in Figure 14, depicts a variation in the dispersions. Presidents have a very broad dispersion of their use although it is fairly affirmative. Instructional administrators are similar to presidents. Student services administrators have narrower dispersion and display lower use. Business affairs administrators have a fairly broad dispersion and low use which is quite different from the other three subgroups.

Figure 15
Category Five B: External Indicators, Community Development
Use of Indicator

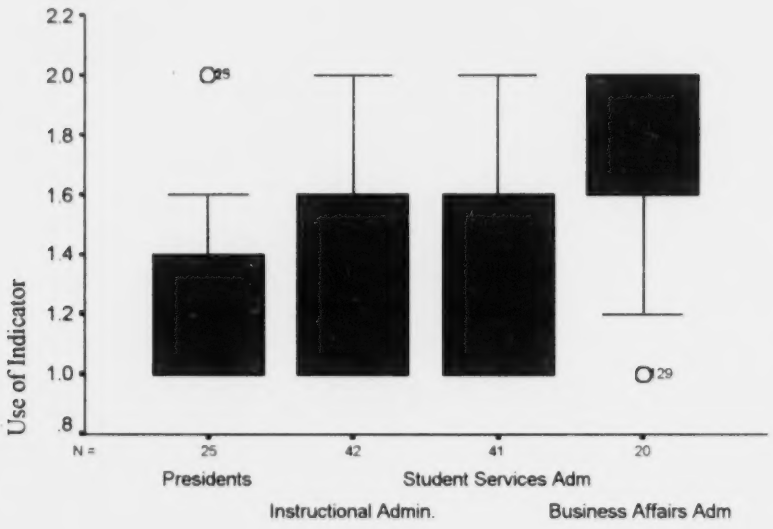


Administrative Position

Note: "Yes" equals 1 and "No" equals 2

Category 5: External Indicators, Community Development, shown in Figure 15, displays dispersions for presidents and instructional administrators which indicate broad dispersion but high use. Student services administrators display a very wide dispersion or use of the indicators but reflect fairly high use. Business affairs administrators show a dispersion which is narrower and the lowest use of the subgroups.

Figure 16
Category Six B: Customer Satisfaction,
Use of Indicator



Administrative Position

Note: "Yes" equals 1 and "No" equals 2

Category 6: Customer Satisfaction, shown in Figure 16, displays a high use for presidents, instructional administrators and student services administrators but the dispersion of presidents is narrower than the other two subgroups. Business affairs administrators have a dispersion similar to presidents but inversely displays non use of the indicators.

Null Hypothesis

Question five was further analyzed beyond normal frequency responses by testing the null hypothesis: There is no significant difference between presidents, instructional administrators, student services administrators and business affairs administrators in the use of effectiveness indicators for initiating institutional change. The question was examined using the one-way analysis of variance, ANOVA, with a fixed design to determine if a significant difference existed between the mean scores of each administrative position. The extent to which they differ was analyzed by using the dependent variable "are using" by each effectiveness category and the independent variable of each administrative position.

The ANOVA test for statistical significance found a significant difference between the mean scores of community college presidents, instructional administrators, student services administrators and business affairs administrators at the .05 level of significance. Therefore, we reject the null hypothesis of no significant difference between the mean scores of each administrative position. The post hoc Boneferroni multiple comparisons test showed significant differences by administrative position in the use of effectiveness indicators in the following categories.

In category 1B, Student Progression Indicators, statistically significant differences were found between business affairs administrators, community college presidents, instructional and student services administrators at the .006, .001 and .002 levels of significance respectively. The basis for this could be that the effectiveness indicators used in the survey were more related in application to the other three positions and less to business affairs administrators. There may also be a lack of recognition about their use in

major decisions as indicated by business affairs administrators in question 16 which surveyed how they were used in decision making processes.

Category 2B, Internal Indicators, statistically significant differences were found by administrative position between business affairs administrators, community college presidents and instructional administrators at the .020 and .001 level of significance respectively. There was however, no significant difference found between business affairs administrators and student services administrators. The same reasoning could be applied here as suggested in category one above.

Category 3B, General Education Indicators, a statistically significant difference by administrative position was found between business affairs administrators and community college presidents at the .023 level of significance but not with either instructional administrators or student services administrators. In Category 3B, indicators were used which relate directly to general education and may appear to be more directly related to learning outcomes and appear to have little relationship to business affairs administrators in the normal operation of a community college. This could lead to the difference of significance between the two positions.

Category 4B, External Indicators: Career and Customized Education, statistically significant differences were found between business affairs administrators, community college presidents and instructional administrators. The use of indicators in this category may again reflect the role of the administrator within the institution since these more closely reflect the role of the president and instructional administrators. The indicator is more directly related to the development and delivery of career and customized education,

a role more common to instruction and college presidents, and less to business affairs administrators given normal division of functions.

Category 5B, External Indicators: Community Development, statistically significant differences were found between business affairs administrators and community college presidents. The significant difference here in the use of indicators may relate to their routine functions since these may be more related to the external role of a community college president and less to the normal functioning of business affairs administrators.

Category 6B, Customer Satisfaction, statistically significant differences were found between business affairs administrators, community college presidents, instructional administrators and student services administrators at the .000, .001 and .000 levels of significance respectfully. The statistically significant differences in the means can again probably be attributed to the various roles performed by each administrative position and the use of the indicators which might be perceived to be more related to the other positions. There appears, however, to be an inability by business affairs administrators to apply the use of the various indicators, as suggested by accreditation, to decision making processes involving planning, budgeting or other institutional improvement decisions.

Research Question 6

Is there a difference by community college administrative position in the belief that the use of effectiveness indicators led to positive changes in their institutions.

Summary of Significant Findings For Question 6

First, Category 5: External Indicators, Community Development, dominated the perception by administrative subgroups that its use led to positive change in community colleges. Second, Category 4: External Indicators, Career and Customized Education, was also rated first by presidents. Third, the dispersion of variances in each administrative subgroup was similar within each category but varied somewhat between categories. Fourth, the perception of each administrative subgroup was positive to very positive about the use of indicators leading to positive change in each category of indicators. Fifth, no statistically significant differences were found between administrative subgroups. Therefore, the null hypothesis could not be rejected.

Presentation and Analysis of Data

The extent to which effectiveness indicators led to positive change in community colleges was measured by the number of positive responses to the Likert type scale by community college administrators where they had already indicated their use of indicators as a means of initiating change at their institutions. The survey questioned whether they believed that the use of effectiveness indicators led to positive change in their respective community colleges. The question was analyzed by examining the difference in

administrators' belief that the use of effectiveness indicators led to change at their institutions.

Table 28
Perception That Use Led to Change:
Comparison of Mean Scores by Administrative Position,
Categorical Order

Category	Indicator	All		Presidents		Instruction		Student Services		Business Affairs	
		n=135		n=25		n=45		n=43		n=22	
		n	mean	n	mean	n	mean	n	mean	n	mean
Category 1	Student Progression Indicators	56.4	.79	12.4	.87	19.2	.88	20.8	.69	6.8	.65
Category 2	Internal Indicators	45.0	.79	7.2	.97	18.7	.90	15.2	.70	3.7	.87
Category 3	General Education Indicators	29.4	.97	8.2	1.04	10.2	1.08	8.9	.79	2.0	.85
Category 4	External Indicators: Career and Customized Education	73.7	1.15	16.0	**1.29**	27.0	1.17	22.3	1.03	8.3	1.16
Category 5	External Indicators: Community Development	56.0	**1.20**	13.5	1.26	20.0	**1.30**	17.0	**1.06**	5.5	**1.18**
Category 6	Customer Satisfaction	68.4	.95	16.6	.92	23.0	1.01	23.6	.91	5.2	.94

Note: Shaded areas indicate categories with the most positive mean scores by administrative position or the perception that the use led to positive change.

The category, shown in Table 28, rated by all respondents as most positive in leading to positive change at their institutions, with a mean score of 1.20, was Category 5, External Indicators: Community Development. This category includes indicators on responsiveness to the community and participation rate in the service area. This same category was rated highest by instructional administrators with a mean score of 1.30 followed by business affairs administrators with a mean score of 1.18 and student services administrators with a mean score of 1.06. Presidents rated Category 5, External

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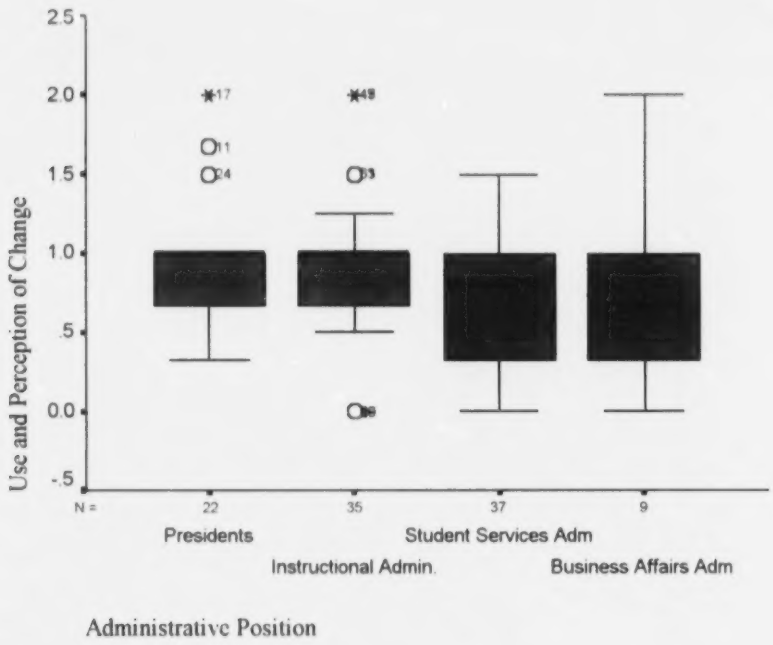
Indicators: Community Development their second highest mean score, and second overall only to instructional administrators. Presidents believed, with a mean score of 1.29, Category 4, External Indicators: Career and Customized Education led to the most positive change.

Two categories of indicators believed by all respondents to be least useful in leading to institutional change, with a mean of .79, was Category 1, Student Progression Indicators, which includes student goal attainment, student persistence (Fall to Fall) and program completion. The second category was Category 2, Internal Indicators, with a mean score of .79 and includes the number and rate who transfer, performance after transfer and success of remedial or developmental students in subsequent related college level course work.

Dispersion of Each Administrative Group

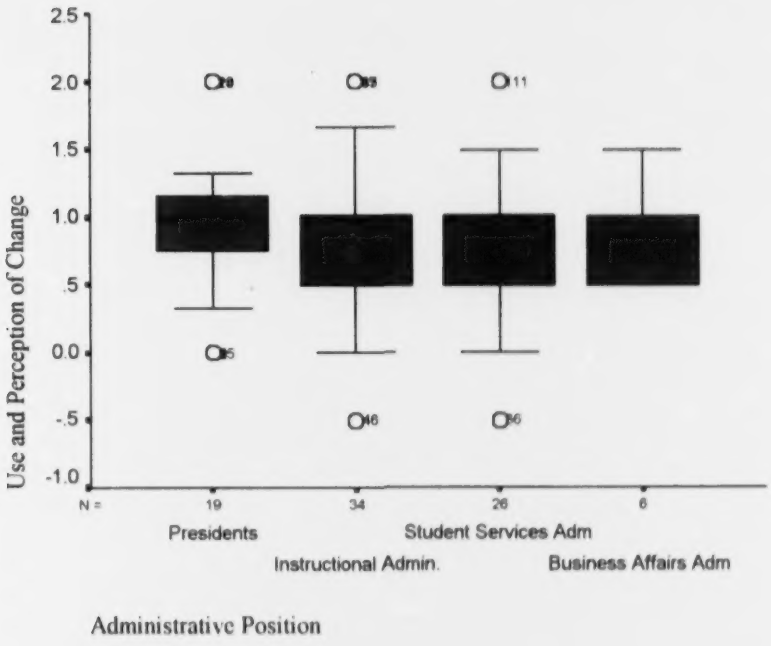
The question was further analyzed using boxplots or stem and leaf dispersion maps to display the spread of variation in their belief by administrators that the use of effectiveness indicators led to positive change at their institutions.

Figure 17
Category One C: Student Progression Indicators,
Use and Perception of Change



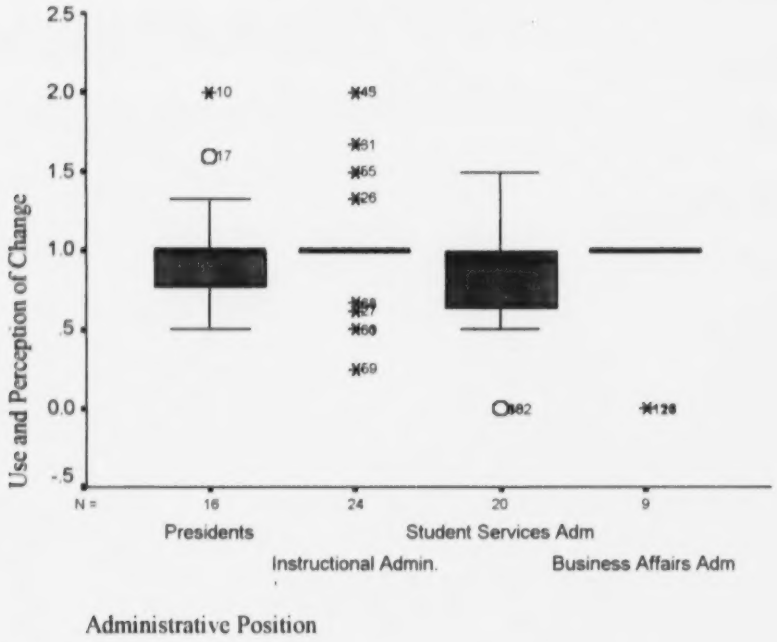
Category 1: Student Progression Indicators, shown in Figure 17, displays data for presidents and instructional administrators which are similar. Both depict positive attributes about the use of indicators and fairly close agreement within the subgroups with the exception of outliers. Student services and business affairs administrators depict wide spreads of variation. They are internally less in agreement and their perception is less positive than either presidents or instructional administrators.

Figure 18
Category Two C: Internal Indicators,
Use and Perception of Change



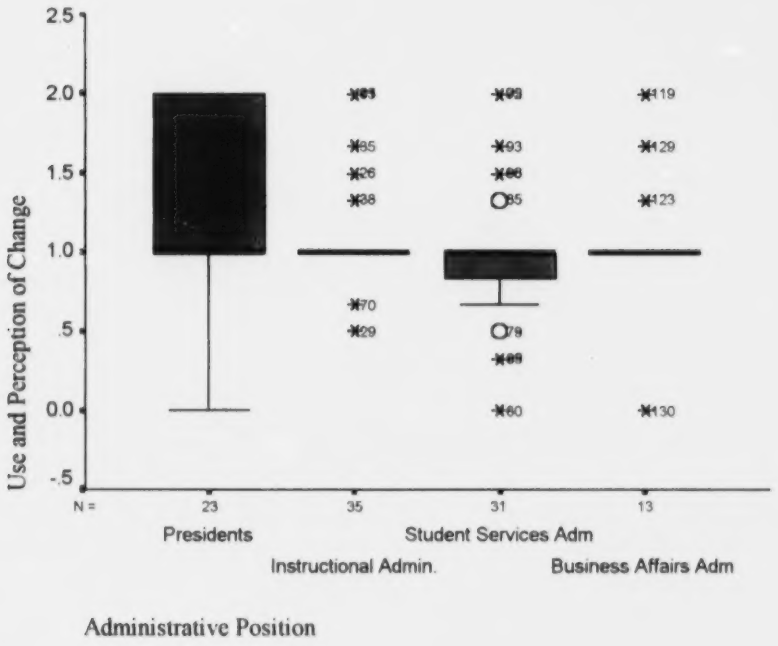
Category 2: Internal Indicators, shown in Figure 18, displays fairly close agreement among college presidents about the positive attributes of having used these indicators. Instructional administrators display more spread and wider range of variation but have a fairly positive opinion slightly below presidents. Student service administrators show a similar pattern but slightly narrower range of dispersion, which is less positive than instructional administrators. Business affairs administrators, although somewhat similar in dispersion on the positive side, show and display a more positive perception about having used the indicator.

Figure 19
Category Three C: General Education Indicators,
Use and Perception of Change



Category 3: General Education Indicators, shown in Figure 19, display fairly close agreement in several subgroup categories. Presidents display narrow dispersion or agreement about the value of having used this indicator. Instructional administrators display very close agreement about the value of having used indicators but have a number of outliers. Student services administrators show the widest dispersion or least agreement in their subgroup about the value of having used this indicator. Although only a few business affairs administrators have used the indicator, they agree their use was positive.

Figure 20
Category Four C: External Indicators, Career and Customized Education, Use and Perception of Change



Category 4: External Indicators: Career and Customized Education, shown in Figure 20, displays a very broad dispersion by presidents but is very positive at the same time. Instructional and business affairs administrators have narrow variation or display similar opinions about the value of having used this indicator although they do have a number of outliers. Student services administrators are slightly less in agreement about the value of using indicators and have the lowest positive opinion about having used this indicator.

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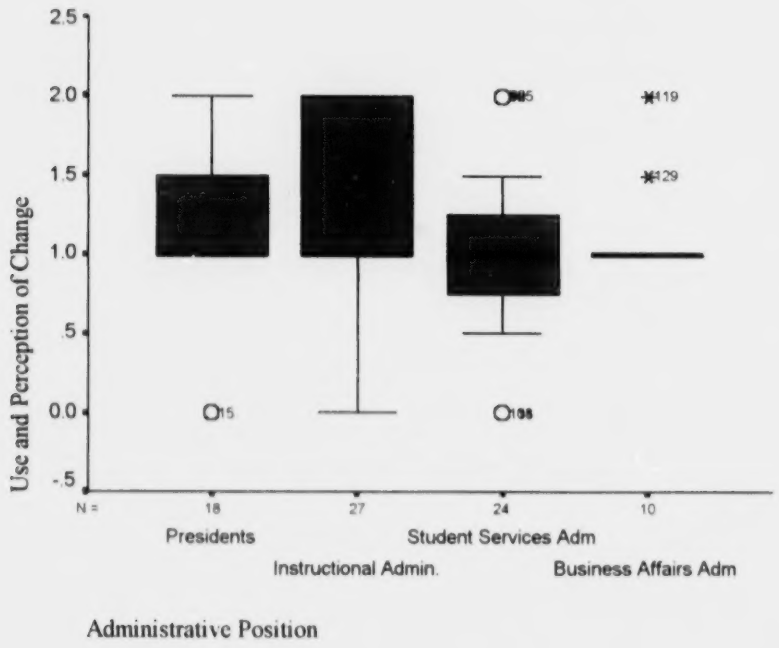
Figure 21
Category Five C: External Indicators, Community Development,
Use and Perception of Change



Category 5: External Indicators: Community Development, shown in Figure 21, indicates similar positive opinions for each subgroup. They display, however, quite different dispersion of variances. Presidents display a very positive opinion about having used indicators with some variation to the positive side. Instructional administrators display a very positive opinion with a wide dispersion towards those positive opinions. Student services administrators display narrow variation but the least positive opinion. Business affairs administrators, although few in number, agree very strongly about the value of having used effectiveness indicators which led to positive change.

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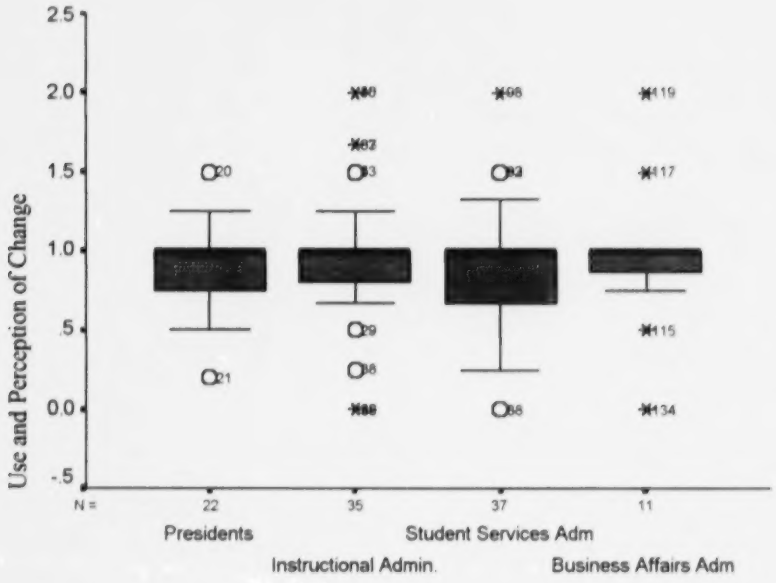
Figure 22
Category Six C: Customer Satisfaction,
Use and Perception of Change



Category 6: Customer Satisfaction, shown in Figure 22, displayed positive opinions by all administrative subgroups with similar narrow dispersions or spreads in variation. A number of outliers are shown for each subgroup.

Null Hypothesis

This still leaves somewhat unanswered the question *"Is there a difference, by administrative position, in the belief that the use of effectiveness indicators led to positive change in their institution?"* The question was tested using the null hypothesis: There is

no significant difference between community college presidents, instructional administrators, student services administrators and business affairs administrators in the belief that the use of effectiveness indicators led to institutional change. The question was analyzed by using a one-way analysis of variance, ANOVA, to determine if significant differences existed between the mean scores of each administrative position. "A statistically significant test tells you only that it is unlikely that all the group means in the population are different, but not which groups are different from each other. The multiple comparisons test will give us this information" (SPSS, 1996, p. 138). The extent to which they differ was analyzed by using the dependent variable "perception of use and change" by each effectiveness category and the independent variable of each administrative position. To determine which group means were different the post hoc Boneferroni multiple comparisons test was used and based on a .05 level of significance.

In Question six, the ANOVA and post hoc Boneferroni multiple comparisons test showed no statistically significant difference between the mean scores of presidents, instructional administrators, student services administrators and business affairs administrators. Therefore, the null hypothesis can not be rejected or there is no significant difference in the belief that the use of effectiveness indicators led to institutional change between community college presidents, instructional administrators, student services administrators and business affairs administrators.

Chapter Summary

Research Question 1

Do community college administrators believe they should use effectiveness indicators for initiating institutional change?

Findings indicate first, overwhelming support was given by administrators about the value of using effectiveness indicators to initiate change. Support ranged from 85.5% to 97.0%. Second, three categories of indicators were perceived above a 90.0% level by all respondents, to be important as a way to initiate change at their institutions. These categories included: Category 4: External Indicators, Career and Customized Education, Category 6: Customer Satisfaction, and Category 1: Student Progression Indicators. Third, presidents rated highest the value of using Category 6: Customer Satisfaction, at 98.3%. Fourth, instructional administrators rated highest the value of using Category 4: External Indicators, Career and Customized Education, at 97.8%. Fifth, student services administrators rated highest the value of using Category 6: Customer Satisfaction, the same as community college presidents, at 98.1%. Sixth, business affairs administrators rated highest the value of using Category 4: External Indicators, Career and Customized Education, at 98.6%. This was also the highest rating for any single category by an administrative group.

Research Question 2

Since the last community college regional accreditation (1990 or later) have community college administrators used effectiveness indicators for initiating change and improvement?

Findings indicate first, all respondents rated four categories of indicators above the 50% level of usage. These categories included: Category 4: External Indicators, Career and Customized Education; Category 6: Customer Satisfaction; Category 5: External Indicators, Community Development; and Category 1: Student Progression Indicators. Second, presidents indicated they used Category 6: Customer Satisfaction, the most at 72.0%, as a way to initiate change. Third, instructional administrators indicated they used Category 4: External Indicators, Career and Customized Education, the most at 69.7%, as a way to initiate change. Fourth, student services administrators indicated they used Category 6: Customer Satisfaction Indicators, the most at 63.9%, as a way to initiate change. Fifth, business affairs administrators indicated they used Category 4: External Indicators, Career and Customized Education Indicators, the most at 40.9%, as a way to initiate change. Sixth, the least used category was Category 3: General Education Indicators at 30.6%. Seventh, indicators were used most for input to decision making processes involving planning, improving services, budgeting, accreditation, and program review. Eighth, indicators were used at low levels for decisions regarding improved learning, ranked number seven, and community accountability ranked number eleven.

Research Question 3

Do community college administrators believe that the use of effectiveness indicators led to positive changes or improvements in their institutions?

The findings indicate first, all respondents believed that Category 5: External Indicators, Community Development, was the indicator which led to the most positive

change. Second, presidents believed Category 4: External Indicators, Career and Customized Education, was the indicator which led to the most positive change. Third, instructional, student services and business affairs administrators believed Category 5: External Indicators, Community Development, was the indicator which led to the most positive change. Fourth, all respondents rated two categories between positive and very positive. The two categories were Category 5: External Indicators, Community Development and Category 4: External Indicators, Career and Customized Education, as the indicators which led to the most positive change.

Research Question 4

Is there a difference by community college administrative position in the belief that they should use effectiveness indicators for initiating institutional change?

The findings indicate first, all respondents believed that they should use effectiveness indicators in a very similar way. Second, all respondents believed Category 4: External Indicators, Career and Customized Education, and Category 6: Customer Satisfaction, would be the most valuable for initiating change at their community colleges. Third, presidents, instructional administrators and student services administrators believed Category 6: Customer Satisfaction, would be most valuable as a way to initiate change. Instructional administrators also believed Category 4: External Indicators, Career and Customized Education, would be most valuable as a way to initiate change. Fourth, business affairs administrators believed Category 4: External Indicators, Career and Customized Education would be most valuable to initiate change. Fifth, dispersion maps

indicate a high level of agreement by each administrative subgroups in the belief that they should use effectiveness indicators to initiate change. Sixth, there is statistically no significant difference between administrative subgroups in the belief that they should use effectiveness indicators to initiate change.

Research Question 5

Is there a difference by community college administrative position in the use of effectiveness indicators for initiating institutional change?

The findings indicate first, two categories of effectiveness indicators dominate the use by administrative groups, Category 4: External Indicators, Career and Customized Education and Category 6: Customer Satisfaction. Second, instructional and business affairs administrators indicated they most used Category 4: External Indicators, Career and Customized Education. Third, presidents and student services administrators indicated they most used Category 6: Customer Satisfaction. Fourth, the categories where effectiveness indicators were most used for decision making included, in rank order by most use, planning, improving services, budgeting, accreditation, and program review. Fifth, administrative subgroups used effectiveness indicators most for decision making processes including planning, although improving services and budgeting were also ranked first in at least one subgroup. Sixth, overall effectiveness indicators were used for decisions regarding legislative and community accountability as 9th and 11th respectively which was very low use in the list of decision making processes. Seventh, dispersions or spread of variations in the use of indicators was much wider than administrators' belief

that they should use indicators. This would indicate varying use by administrators. Eighth, business affairs administrators displayed about the same dispersion but lower use than other administrative subgroups. Ninth, ANOVA test found significant statistical differences between administrative subgroups. Tenth, post hoc multiple comparisons test showed a significant difference between business affairs administrators and one or more other administrative subgroups in each category of indicators.

Research Question 6

Is there a difference by community college administrative position in the belief that the use of effectiveness indicators led to positive changes in their institutions?

The findings indicate first, Category 5: External Indicators, Community Development, dominated the perception by administrative subgroups that its use led to positive change in community colleges. Second, Category 4: External Indicators, Career and Customized Education, was also rated first by presidents. Third, the dispersion of variances in each administrative subgroup was similar within each category but varied somewhat between categories. Fourth, the perception of each administrative subgroup was positive to very positive about the use of indicators leading to positive change in each category of indicators. Fifth, no statistically significant differences were found between administrative subgroups. Therefore, the null hypothesis could not be rejected.

Chapter V: Summary of Findings Conclusions, Implications and Recommendations

The purpose of this study was to examine in selected northwest community colleges that have undergone accreditation since 1990, the perceived importance of using effectiveness indicators for assessing institutional outcomes and investigate their congruence with actual or potential use for making institutional changes and improvements.

General objectives of the study included:

1. To determine which effectiveness indicators are suggested by the accreditation process and related literature and can be used for assessing institutional effectiveness;
2. To determine what the research literature has to say about the use of effectiveness indicators in assessment practice and for use in initiating institutional change.

Research objectives of the study included:

1. To determine if community college administrators believe they should use effectiveness indicators for initiating institutional change;
2. To determine if community college administrators whose institutions have been accredited since 1990, have used effectiveness indicators to initiate change in their respective community colleges;
3. To determine if community college administrators believe that the use of effectiveness indicators led to positive change at their institutions;

4. To determine if there was a difference by community college administrative position in the belief that they should use effectiveness indicators for initiating institutional change;
5. To determine if there was a difference by community college administrative position in the use of effectiveness indicators for initiating institutional changes;
6. To determine if there was a difference by community college administrative position in the belief that the use led to positive changes in their community colleges.

In order to accomplish this task, eight questions guided this study.

General questions that set the context and guided the literature review were:

1. What kind of purposely selected effectiveness indicators are suggested by the accreditation process and related literature, and can be used to base institutional effectiveness assessment?
2. What does the research literature have to say about the use of effectiveness indicators in assessment practices and for making institutional change?

Research questions that guided this investigative quantitative study were:

1. Do community college administrators believe they should use effectiveness indicators for initiating institutional change?
2. Since the last community college regional accreditation (1990 or later) have community college administrators used effectiveness indicators for initiating institutional change?
3. Do community college administrators believe that the use of effectiveness indicators led to positive changes in their institutions?

4. Is there a difference by community college administrative position in the perception about the perceived importance of using effectiveness indicators for initiating institutional change?
5. Is there a difference by community college administrative position in the use of effectiveness indicators for initiating institutional change?
6. Is there a difference by community college administrative position in the perception that the use of effectiveness indicators led to positive changes in the institution?

Survey research was used to conduct a study of primary community college administrators serving in community colleges accredited since 1990 by the Northwest Association of Schools and Colleges.

A 24 item questionnaire was mailed in May and June, 1997, to 232 potential respondents representing 59 northwest community colleges. After removing invalid responses, particularly those completed by someone other than the intended recipient, 135 valid responses were used in the data analysis which included 7 duplicated for equal weight where the administrator represented both instruction and student services. The valid response rate was 55.2%. The return rate included: presidents at 25 or 42.4%; instructional administrators at 45 or 76.3%; student services administrators at 43 or 72.9%; and business affairs administrators at 22 or 37.3%.

The questionnaire was based on six categories of indicators representing 21 different suggested measures. The indicators were primarily derived for the AACC Core Indicators Model except for Category 3: General Education and Category 6: Customer Satisfaction which were derived from the literature review and past institutional practice.

Descriptive analysis was used to examine research questions one, two and three. Primarily mean scores, distributions and rank orders were used to examine the belief that community college administrators should use effectiveness indicators, that they use effectiveness indicators, and that they believe the use led to positive change in their respective community colleges. The questions were further analyzed to determine which categories had the most and least support for use at initiating institutional change.

Questions four, five and six examined the differences between primary administrators and their belief that they should use effectiveness indicators, have used effectiveness indicators and the belief that the use led to positive change. The differences were analyzed using descriptive statistics and boxplots to visually analyze dispersion or degree of variances within each category and group.

The extent to which these subgroups of primary administrators differed in the belief or behavior was analyzed using an ANOVA to determine if there were statistically significant differences. A post hoc Boneferroni multiple comparisons test was used to determine that if there were statistically significant differences, which group means were different.

Summary of Findings

All administrators believe that they should use effectiveness indicators to initiate institutional change. Support ranged from 85.5% to 97.0%. Three categories of indicators were rated above the 90% level. They included Category 4: External Indicators, Career and Customized Education; Category 6: Customer Satisfaction; and

Category 1: Student Progression Indicators. The lowest rating for a single category was Category 3: General Education Indicators.

All administrators used effectiveness indicators at a much lower rate than they believed they should use them. Only four indicators were used by all administrators above the 50% level: Category 4: External Indicators, Career and Customized Education; Category 6: Customer Satisfaction; Category 5: External Indicators, Community Development; and Category 1: Student Progression Indicators. The least used category by all respondents was Category 3: General Education Indicators. Administrators used effectiveness indicators most for decision making processes involving planning, improving services, budgeting, accreditation and program review. They used effectiveness indicators least for community accountability.

Administrators believed that the use of Category 5: External Indicators, Community Development was the indicator that led to the most positive change in their institutions. Administrators believed that the use of two categories led to positive or very positive change: Category 5: External Indicators, Community Development; and Category 4: External Indicators, Career and Customized Education.

All respondents affirmatively agreed that they should use effectiveness indicators. Administrators' beliefs varied between Category 6: Customer Satisfaction and Category 4: External Indicators, Career and Customized Education, as to which indicator would be most useful to initiate change. Administrators had a high level of agreement between each administrative subgroup, or low dispersion of variances in the belief that they should use effectiveness indicators. Administrative subgroups had no statistically significant difference in their belief that they should use effectiveness indicators to initiate change.

Administrators use two groups of effectiveness indicators most: Category 4: External Indicators, Career and Customized Education, and Category 6: Customer Satisfaction. Administrators used effectiveness indicators most for decision making processes involving planning, improving services, budgeting, accreditation and program review. Administrative subgroups ranked planning first and most frequently. Dispersion of spread of variation was much wider than belief in the use of effectiveness indicators, although use was moderate except for business affairs administrators. Business affairs administrators showed similar dispersion but low use of indicators. Significant statistical differences were found for administrative subgroups and post hoc multiple comparisons test showed significant differences between business affairs administrators and one or more other administrative subgroups.

All administrators who have used effectiveness indicators believe that Category 5: External Indicators, Community Development led to the most positive change. Category 4: External Indicators, Career and Customized Education was also rated most useful by presidents. The dispersion of variances between administrative subgroups for each category were similar but varied between categories. The belief that the use led to positive change was positive to very positive for each administrative subgroup in each category of indicators. No statistically significant differences could be found between administrative subgroups in the belief that the use of indicators led to positive change.

Conclusions

Although it may seem self evident, almost all administrators believed they should be using effectiveness indicators to initiate change at their institutions. This perception check was important since without the belief in the value of using indicators, behavior or use of the indicators to initiate change probably would not take place.

The study confirms the belief in the use of an institutional effectiveness model as required by the Northwest Association of Schools and Colleges, but indicates a lack of application and use of this model, to any major extent, in the normal institutional functioning and decision making process. The study did provide evidence that where it was used there were positive results from initiating institutional change and improvement.

The result of community colleges not adopting meaningful and useful effectiveness indicators, publicly reported to our stakeholders and intentionally used for on-going change and improvement, leads to public policies requiring performance indicators in budget authorization bills or other legislative mandates as is currently prevalent in many states including the northwest.

Educators believe in change and improvement focused on learners and learning. This belief is firmly held. We must however, through our actions, convince our publics of our continuous improvement and publicly report our successes in varying degrees and include those areas needing improvement and our anticipated action for improving weak performance.

Community colleges claim to be focused on the needs of their unique districts, but we must confirm our successes and tell our stories in meaningful and convincing ways. Effectiveness models using indicators must reflect each unique institutional mission and present a picture, based on qualitative and quantitative evidence, which is convincing to our stakeholders if we expect continued or enhanced public support.

Effectiveness indicators must always allow us to reflect on learners and learning in meaningful ways. First, models of institutional effectiveness must begin at the core of the educational process and focus on the individual students as learners. Second, the model must focus on the department, division or programmatic level and provide quantitative and qualitative information used for change and improvement in programs. Third, effectiveness models must provide meaningful institutional effectiveness indicators which can be viewed externally by the public and not only tell our community college story but provide meaningful information for internal decision making and institutional change and improvement.

The failure of using an effectiveness model to initiate change and improvement, as well as provide accountability to our communities and state stakeholders, will lead to publicly mandated performance or accountability measures which may or may not reflect our unique missions and at worst could reflect partisan politics. If educational institutions wish to remain independent to achieve their unique missions we must use an effectiveness model which provides us the tools for self improvement and the information necessary to tell our story to our publics. The institutional effectiveness model required by accreditation and embraced by community colleges can and must be used to achieve this goal.

Implications and Recommendations

The Northwest Association of Schools and Colleges must enforce Standard 5, Policy #25, now known as Policy Statement 2.2, Policy on Educational Assessment, which requires the adoption of an institutional effectiveness model. Failure by community colleges to adopt this model should result in censure by the Northwest Association of Schools and Colleges until compliance is achieved.

Recommendation 1

Institutions must embrace the institutional effectiveness model as a mechanism useful for the continuous improvement process necessary for community college improvement and the achievement of student learning.

Recommendation 2

Faculty, staff, administrators and boards must be trained in the application and use of the institutional effectiveness model. There is an apparent lack of knowledge and understanding by faculty, staff, administrators and boards in using an effectiveness model. There is a need for on-going training in using an effectiveness model for day to day and year to year decision making and improvement practices. This training could be provided by the Northwest Association of Schools and Colleges, professional associations, or internally by knowledgeable educators.

Recommendation 3

Boards must establish outcomes or institutional goals based on their unique community college mission and establish the foundation for the establishment of other institutional goals and objectives.

Recommendation 4

Boards must hold the community college president or CEO accountable for the achievement of these institutional outcomes.

Recommendation 5

Continuous assessment as a way of thinking and doing must be completed at all levels of the institution by using quantitative and qualitative assessment in the evaluation of outcomes or processes.

Recommendation 6

Institutions must adopt an assessment model prominently placed within the organization, responsible to the President, for the development and implementation of an assessment process with the involvement of all internal stakeholders. All assessments must be developed, applied, interpreted and used in conjunction with college programs and personnel. Decisions must reflect goals and assessment not status quo or political expedience.

Recommendation 7

Indicators and measures must ultimately reflect the institutions' goals and objectives. Measures must be developed at each level or process by the persons closest to the process, including faculty, staff and administrators.

So What if We Don't

Accountability measures in the form of performance measures will be adopted by legislatures, state boards, or even the Office of Education at the federal level. When peer review fails to enforce its own accreditation processes, the public will ultimately react. The development of public policies, sometimes even showing up in budget bills, may reflect partisan politics more than good educational practices. Unsubstantiated public educational policies can lead to unfocused goals, objectives, and compliance behavior, which ultimately leads to the antithesis of both good educational practices and a focus on students as learners and the learning process we are trying to improve. This focus is usually best understood by educational professionals closest to the student. We must enforce our own standards of accreditation and embrace the institutional effectiveness model.

Recommendations for Future Study

Based on the findings and implications of this study, the following recommendations are made:

1. This study could be conducted on a much broader audience and include both Boards of Trustees and faculty to examine why there is low use of the effectiveness indicators.
2. A study could be conducted to identify why there is an inability to use effectiveness indicators for routine functioning of a community college.
3. A study could be conducted to identify the best practices used by community colleges who have used effectiveness indicators and believe that they led to positive change.
4. A study could be conducted to identify detractors in the use of effectiveness indicators in the functioning of a community college.

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Appendices

Appendix A
Detail Summary of Assessment Projects

Matrix Table: Assessment Purpose and Indicators

	Boreman, et.at. 1990	Craig 1991	Laden 1992	Beeler, et.al. 1992	Lucas Meltesen 1993	Long Amey 1993
(A) FACTS						
Theory or Model Development		X		X		
Applied Research	X		X		X	X
Single Institution					X	X
Multiple Institution	X	X	X	X		
(B) PURPOSE						
Compliance						
Persuading				X		
Monitoring	X					
Improving	X	X		X	X	
Judging	X					
(C) TYPES OF INDICATORS USED						
Input			X			X
Process (Environmental)			X			X
Outcomes		X		X	X	X
Contextual			X			
Return on Investment						
Customer Satisfaction					X	

Matrix Table: Assessment Purpose and Indicators

	Levine, Clowes	McConochie Rajasek-haram	Bowyer	Catlin, Kalina	Head	Coleman, Bolte
	1991	1992	1990	1993	1994	1988
(A) FACTS						
Theory or Model			X	X		
Development						
Applied Research	X	X			X	X
Single Institution					X	X
Multiple Institution	X	X	X	X		
(B) PURPOSE						
Compliance	X	X	X			
Persuading						
Monitoring		X				
Improving	X		X	X	X	X
Judging						
(C) TYPES OF						
INDICATORS USED						
Input						X
Process (Environmental)			X	X		X
Outcomes	X	X	X	X	X	X
Contextual						
Return on Investment						
Customer Satisfaction			X			

Matrix Table: Assessment Purpose and Indicators

	Fadale, Winter 1985	Armstrong 1993	Andero 1992	Holton 1991	Conklin 1992	Farahani 1993
(A) FACTS						
Theory or Model Development						
Applied Research	X	X	X	X	X	X
Single Institution				X	X	X
Multiple Institution	X	X	X			
(B) PURPOSE						
Compliance						X
Persuading	X					
Monitoring	X		X	X	X	X
Improving	X			X	X	X
Judging		X				
(C) TYPES OF INDICATORS USED						
Input						X
Process (Environmental)		X				
Outcomes	X	X	X	X	X	X
Contextual						
Return on Investment						
Customer Satisfaction			X	X	X	X

Matrix Table: Assessment Purpose and Indicators

	Starrfield	Von Wald	U.S. Dept of Education	Brand	Heaney	Hinkle
	1991	1991		1992	1990	1990
(A) FACTS						
Theory or Model				X	X	
Development						
Applied Research	X	X	X	X	X	X
Single Institution	X	X				
Multiple Institution			X	X	X	X
(B) PURPOSE						
Compliance				X		
Persuading						
Monitoring	X		X	X	X	
Improving		X		X		
Judging						
(C) TYPES OF						
INDICATORS USED						
Input		X	X			
Process (Environmental)				X		
Outcomes	X	X	X	X	X	X
Contextual			X			
Return on Investment	X					
Customer Satisfaction	X	X		X		

Matrix Table: Assessment Purpose and Indicators

	Harris	Lutz	S. Alabama Skills Center	Chu	Dennis-Rounds	Brown
	1995	1992	1993	1991	1989	1991
(A) FACTS						
Theory or Model Development	X					
Applied Research	X	X	X	X	X	X
Single Institution	X					
Multiple Institution		X	X	X	X	X
(B) PURPOSE						
Compliance			X			
Persuading						
Monitoring				X		X
Improving	X	X	X			X
Judging		X		X		X
(C) TYPES OF INDICATORS USED						
Input			X	X	X	
Process (Environmental)	X	X	X		X	X
Outcomes	X	X	X	X	X	X
Contextual	X					
Return on Investment						
Customer Satisfaction	X	X				

Appendix B
Cover Letters used in Survey

Dear Colleague:

Within the next few days you will receive a request to complete a brief questionnaire. This is a survey about assessment and its use to initiate change in community colleges. The survey is being conducted as part of my doctoral studies in Education, Community College Leadership, at Oregon State University and is co-sponsored by Highline Community College in Des Moines, Washington.

Your immediate and reflective thoughts will add to the conversation, information and knowledge about the use of assessment information in Northwest Community Colleges. Thank you in advance for your assistance.

Sincerely,

Jim Sorensen
Vice President for Students
Highline Community College

Dear Colleagues:

Institutional effectiveness in community colleges is vital to education. As a President, Chief Instructional, Chief Student Services, or Chief Business Affairs Officer in a northwest community college, I need to know your attitudes and behaviors about the use of assessment information and its application for initiating institutional change.

You are part of a select number of persons from northwest community colleges who have completed a self study since 1990. Your response is vitally important. The questionnaires are coded for categorization and follow-up of non respondents, but your responses are completely confidential.

Please return your questionnaire by June 15, 1997. If you have any questions, please call me at 206-878-3710 ext. 3503, or write to me at the enclosed address.

Sincerely,

Jim Sorensen
Vice President for Students
Highline Community College

Dear Colleague,

Last week, you received a questionnaire seeking your opinions about the use of assessment information for initiating institutional change. You are part of a study of administrative officers in northwest community colleges who have completed a self study since 1990, and your attitudes and opinions are critical.

If you have returned the questionnaire, please accept my thanks. If not, please do so today. We believe your response will help use better understand the use of assessment information for initiating institutional change.

If you did not receive a questionnaire or it was misplaced, please call me at 206-878-3710 ext. 3503, and I will get a new one to you immediately.

Sincerely,

Jim Sorensen
Vice President for Students
Highline Community College

Dear Colleague:

About three weeks ago, I wrote to you asking your opinion on the issue of assessment and use of assessment information for initiating institutional change. As of today, I have not received your completed survey. I realize you may not have had time to complete the survey. I would, however, genuinely appreciate hearing from you today.

The study is being conducted on community colleges accredited by the Northwest Association of Schools and Colleges who have completed a self study since 1990. Your response is needed to help better understand the application of assessment information in community colleges and the use of assessment information for initiating change.

If you lost your questionnaire, a replacement is enclosed. I would be happy to answer any questions you might have about the questionnaire by calling me at 206-878-3710 ext. 3503, or write to me at the enclosed address.

Sincerely,

Jim Sorensen
Vice President for Students
Highline Community College

Appendix C
Survey on Assessment and Institutional Change

CODE _____

A Survey on

Assessment and Institutional Change

In
Northwest Community Colleges

Research co-sponsored by
Highline Community College

Please return your completed questionnaire
in the enclosed stamped envelope to:

Jim Sorensen, Vice President for Students MS 6-11
Highline Community College
PO Box 98000
Des Moines, Washington 98198-9800

Dear Colleague,

I am asking for your help. I assume that you are as interested as I am at improving your institution for students and public we serve. As part of my doctoral studies in the Community College Leadership Program at Oregon State University, I am conducting a survey about the application of effectiveness indicators to initiate change in Northwest Community Colleges. I need your assistance.

The use of assessment indicators of effectiveness is an issue which has been discussed for the past ten years in higher education, as a way to assess our institutions and initiate change. I am interested in your opinion about the use, and benefits of using effectiveness indicators for initiating this change.

You are part of a study of Presidents, Chief Instructional, Chief Student Services and Chief Business Affairs Administrators in Northwest Community Colleges who have completed a self study since 1990. Your response to this questionnaire is critical because of the small numbers of persons in positions such as yours. Your responses are confidential. I have coded each questionnaire to assist in tracking the return of the questionnaire and the prompting of participants who have not returned their questionnaire. Your name will never be connected to your individual answers and will always be confidential.

I have enclosed a self-addressed, stamped envelope for your convenience. Please fold the questionnaire and return it in this envelope as soon as possible.

Your immediate and reflective thoughts will add to the conversation on the use of assessment information in community colleges.

Thank you!

Jim Sorensen
Vice President for Students
Highline Community College

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The following are categories of educational effectiveness indicators. Please answer sections A, B, and C as they relate to each indicator. Place an "X" in the appropriate location for your answer.	A Perception of indicator: Do you believe this indicator is important or not important as a way to intitiate change at your institution?	
Category 1	Yes, is important	No, not important
1. Student Goal Attainment 1a. Measure: Number of students who leave and report their goal for attending college was met.		
2. Student Persistence (Fall to Fall) 2a. Measure: Fall Quarter cohort who are still enrolled the following Fall Quarter and have not graduated.		
2b. Measure: Retention rates of students from quarter to quarter (credit students only).		
3. Program Completion 3a. Measure: Degree and certificate completion rates.		
3b. Measure: Entering degree seeking students who complete a degree over time. Information is updated annually.		
Category 2		
4. Number and Rate Who Transfer 4a. Measure: Number of entering students by cohort in a degree program, completing at least twelve credits, who enroll within two years at a four year college in a degree program.		
5. Performance After Transfer 5a. Measure: Number of community college students transferring compared to native students at four year institutions who complete courses with a "C" or better.		
6. Success of Remedial or Developmental Students in subsequent, related college level course work 6a. Measure: Proportion of entering students deficient in one or more basic skills (reading, writing and computation) who complete developmental work within one year and who complete their first college level course with a "C" or better.		

Please continue on the next page.

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B **Use of Indicator: Have you, yourself, *used* this indicator to initiate change at your institution?** **If you answer "yes", please answer the corresponding question in column C.**			C **If you have used the indicator to initiate change as you indicated in "B," has the use of this indicator led to changes at your institution?**					
Yes	No	No, but plan to use	Don't Know	Very Negative Change -2	Negative Change -1	No Change 0	Positive Change +1	Very Positive Change +2

Please turn page and continue.

The following are categories of educational effectiveness indicators. Please answer sections A, B, and C as they relate to each indicator. Place an "X" in the appropriate location for your answer.	A Perception of Indicator: Do you believe this indicator is important or not important as a way to initiate change at your institution?	
Category 2 continued	Yes, is important	No, not important
6b. Measure: Number of students who progress from GED, ESL and developmental courses to success in college level courses.		
Category 3		
7. Demonstration of General Education Outcomes 7a. Literacy Skills Measure: Determined locally by your community college.		
7b. Exposure to and knowledge of the natural world (Science) Measure: Determined locally by your community college		
7c. Exposure to and knowledge of the arts and humanities (Humanities) Measure: Determined locally by your community college.		
7d. Exposure to and knowledge of culture (Social Sciences) Measure: Determined locally by your community college.		
7e. Cultural awareness (Pluralism/Diversity) Measure: Determined locally by your community college.		
7f. Computational Skills Measure: Determined locally by your community college.		
7g. Critical thinking and research skills Measure: Determined locally by your community college.		
7h. Application of skills, such as learning into action, community service or service learning. Measure: Determined locally by your community college.		
Category 4		
8. Placement Rate in the Work Force 8a. Measure: Proportion of entering student cohort who achieve a "marketable skill" by completing three or more courses in an occupational program and who obtain employment in a field directly related to that skill within one year after leaving.		

Please continue on the next page.

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B Use of Indicator: Have you, yourself, *used* this indicator to initiate change at your institution? If you answer "yes", please answer the corresponding question in column C.			C If you have used the indicator to initiate change as you indicated in "B," has the use of this indicator led to changes at your institution?					
Yes	No	No, but plan to use	Don't Know	Very Negative Change -2	Negative Change -1	No Change 0	Positive Change +1	Very Positive Change +2

Please turn page and continue.

The following are categories of educational effectiveness indicators. Please answer sections A, B, and C as they relate to each indicator. Place an "X" in the appropriate location for your answer.	A Perception of Indicator: Do you believe this indicator is important or not important as a way to intitiate change at your institution?	
Category 4 continued	Yes, is important	No, not important
9. Employer Assessment of Students 9a. Measure: Proportion of sampled regional employers in a given field who indicate students from your community college have skills equal to or better than other employees.		
10. Client/Customer Assessment of Programs and Services 10a. Measure: Survey, focus groups, or interviews to determine satisfaction of your customers, such as business and industry, public or private customers, about your programs, activities or services.		
Category 5		
11. Responsiveness to Community 11a. Measure: Survey, focus groups or interviews to identify community needs, your responsiveness to those needs, and a demonstration that the college has met or satisfied those needs.		
12. Participation Rate in Service Level 12a. Measure: Proportion of local population in your service area who have participated in an organized college activity during the past year.		
Category 6		
13. Student on Customer Satisfaction 13a. Measure: Survey student satisfaction with preparation for their current employment one year after completing their program.		
13b. Measure: Employer satisfaction with your former students as graduates.		
13c. Measure: University and four year college satisfaction with academic preparation of your transfer students.		
13d. Measure: Student satisfaction with teaching effectiveness.		
13e. Measure: Student satisfaction with Student Services		

Please continue on the next page.

BEST COPY AVAILABLE

B **Use of Indicator: Have you, yourself, *used* this indicator to initiate change at your institution?** **If you answer "yes", please answer the corresponding question in column C.**			C **If you have used the indicator to initiate change as you indicated in "B," has the use of this indicator led to changes at your institution?**					
Yes	No	No, but plan to use	Don't Know	Very Negative Change -2	Negative Change -1	No Change 0	Positive Change +1	Very Positive Change +2

Please turn page and continue.

ASSESSMENT
General Questions

14. Have you been involved in completing a full accreditation study in a community college accredited by the Northwest Association of Schools and Colleges, Commission on Colleges since 1990?

    ❑ Yes ❑ No

15. Are you currently a/an

    1. ❑ Chief Executive Officer
    2. ❑ Chief Instructional Administrator
    3. ❑ Chief Student Services Administrator
    4. ❑ Chief Academic & Student Services Officer
    5. ❑ Chief Business Affairs/Administrative Services Officers
    6. ❑ Other _____

    15a. Do you have budget responsibility and authority for this operational area commonly associated with your answer to question #15 above?

    ❑ Yes ❑ No

16. Have *you* in your area of responsibility used assessment information as input to the decision making process in any of the following areas. Check *each* response in which assessment information has been used.

    1. ❑ Planning
    2. ❑ Budgeting
    3. ❑ Program review
    4. ❑ Accreditation
    5. ❑ Quality improvement measures
    6. ❑ Improving services
    7. ❑ Improving learning
    8. ❑ Improving occupational programs
    9. ❑ Improving general education outcomes
    10. ❑ Legislative accountability
    11. ❑ Community accountability
    12. ❑ Other _____

    16a. List in priority order the number of the top five decision making processes where you, yourself, have considered and used assessment information for making decisions.

    Most important Least important

    1. _____ 2. _____ 3. _____ 4. _____ 5. _____

Please continue on the next page.

17. Who, if any, was involved in the identification, development, and assessment of effectiveness indicators at your institutions (Mark one)

    1. ❑ Faculty
    2. ❑ Administration
    3. ❑ Classified Staff
    4. ❑ Students
    5. ❑ All the Above
    6. ❑ Don't Know
    7. ❑ Other Combination _____

18. Please identify positive changes or improvements which may have occurred at your institution by using effectiveness indicators.

    Positive Changes: _____
    _____
    _____

    Negative Changes: _____
    _____
    _____

19. How large is your institution in total FTEs? (Include all fund sources)

    1. ❑ 1-2,499
    2. ❑ 2,500-4,999
    3. ❑ 5,000-7,499
    4. ❑ 7,500-9,999
    5. ❑ 10,000+

20. Please describe your college as mostly serving an urban or rural population?

    1. ❑ Mostly or all Rural
    2. ❑ Suburban
    3. ❑ Mostly or all Urban

21. Please describe any concerns about the collection and use of institutional effectiveness information at your institution for initiating institutional change?

    _____
    _____
    _____
    _____

Please turn page and continue.

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22. Please describe any concerns about the use of institutional effectiveness information by your publics, such as the local community, legislators, and public or private agencies?

_____
_____
_____
_____

23. Do you wish to receive a copy of the results? ❑ Yes ❑ No

24. Comments: _____
_____
_____
_____

Thank you for responding and returning this questionaire.